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ABSTRACT

Designed to accompany four filmstrips, this manual was developed to help early childhood educators--including curriculum specialists, administrators, teachers, and university faculty--implement a developmental program for young children. Filmstrip 1 introduces six components of curriculum organization and classroom mangement underlying a developmental approach. The three curriculum organization components (learning centers, skills groups, and units of study) and the three classroom management components (color coding, contracts, and internal and external discipline techniques) are defined and illustrated in a multi-age kindergarten/first-grade classroom. Filmstrip 2 follows a first grader through his daily activities in a variety of learning centers, math and reading skill groups, and social studies, emphasizing the application of curriculum organization and classroom management components. Evaluation techniques are additionally recommended. Filmstrip 3 details techniques used to implement an experiential, hands-on approach for teaching social studies and science concepts to young children through mini-lessons in home-based groups and through learning center activities. A unit of study in physical science titled "Moving Around" is presented as an example. Finally, filmstrip 4 reviews the rationale for a developmental approach and introduces methods for assessing the effectiveness of early childhood programs. A list of worksheets, sample worksheets, and a bibliography are appended. (MP)

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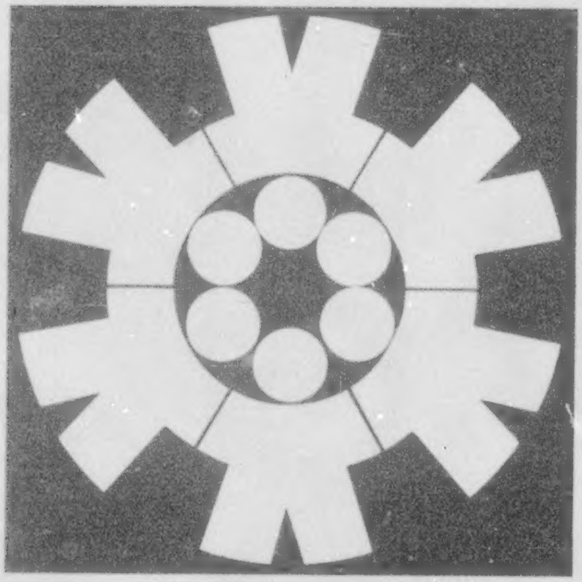

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curriculum organization and classroom management

Barbara Day • Kay Drake

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Early Childhood Education:

Curriculum Organization and Classroom Management

Overview

This manual is designed to accompany four filmstrips. Together, the manual and the filmstrips detail an approach to creating an early childhood learning environment that encompasses the current research on how children learn. Emphasis is placed on the organization and management of the classroom in order to 1) provide for active participation, observation, exploration, and verbalization on the part of the child; 2) meet the needs of the total child -- cognitive, affective, and psychomotor; and 3) match the curriculum to the developmental needs, interests, and learning styles of each child. The manual and the filmstrips are designed to help educators implement a developmental program for young children.

AUDIENCE

Early Childhood Education: Curriculum Organization and Classroom Management is intended for early childhood educators, including curriculum specialists, administrators, teachers, and university faculty. It is designed for staff development programs, teacher education classes, or for use as self-instruction by individuals.

CONTENT

The kit contains four filmstrips with audiocassettes. The filmstrips are most effective when used in sequence.

Filmstrip 1

"The Six Components" introduces the six components of a developmental approach to early childhood education. The three curriculum organization components -- learning centers, skills groups, and units of study -- and the three classroom management components -- color coding, contracts, and internal and external discipline techniques -- are defined and illustrated in a multi-age kindergarten/first-grade classroom setting.

Filmstrip 2

"A Typical Day" follows an individual child, Matthew, through his daily activities in the classroom. Emphasis is on the six components of curriculum organization and classroom management and how they organize Matthew's program.

Filmstrip 3

"A Unit of Study" details techniques used to implement an experiential, hands-on approach for teaching social studies and science concepts to young children. Units of study are organized and taught through an integrated approach using both group and learning center activities. A unit of study in physical science titled "Moving Around" is presented as an example.

Filmstrip 4

"Does It Work?" reviews the rationale for a developmental approach in teaching young children and introduces methods for assessing the effectiveness of early childhood programs. The use of appropriate objective measures of classroom behavior is stressed, including detailed instructions on how to use the Wasik-Day Open and Traditional Learning Environments and Children's Classroom Behavior Instrument.

These filmstrips, used with the manual, allow early childhood practitioners to assess their own philosophies of teaching, plan learning environments that meet children's developmental needs, design their own contracts, organize plans and develop materials for teaching units in learning centers, implement small group skills instruction in math and reading, and apply such management techniques as color coding and internal and external discipline methods to their own classrooms. Worksheets in the Appendix and material shown in the figures and checklists may be reproduced for classroom use by teachers, supervisors, and administrators.

HISTORY

The program was developed at Elizabeth Seawell Elementary School, Chapel Hill, North Carolina. Seawell is one of six elementary schools in the Chapel Hill-Carrboro City School District. It serves children from diverse ethnic, educational, and economic backgrounds. The components of the program have evolved since the opening of Seawell in 1970.

RATIONALE

What is the theoretical basis for a developmental approach to early childhood education?

> At the heart of the educational process lies the child. No advances in policy, no acquisitions of new equipment have their desired effect unless they are in harmony with the nature of the child, unless they are fundamentally acceptable to him.
>
> Knowledge of the manner in which children develop, therefore, is of prime importance, both in avoiding educationally harmful practices and in introducing effective ones.
>
> The Plowden Report
> Children and Their Primary Schools, Vol. I

As the Plowden Report points out, it is necessary to understand the principles and theories of child development in order to plan effective early childhood programs.

Barbara Day, in Early Childhood Education: Creative Learning (1983), examines the many historical precedents that lend credibility to a developmental approach for the education of young children:

> The European educator Pestalozzi (1746-1827) proposed that the young child learned best through activity and sense perception. His learning through discovery approach influenced Froebel, the father of the kindergarten. He observed that child's play was the main vehicle for learning, and proposed that curriculum for young children be based on the child's natural desire to play and discover. He also proposed that the curriculum reflect the interests, impulses, and capacities of the specific group of children involved. Open education reflects a respect for this natural process of discovery called play. Maria Montessori, Italian physician and educator, stressed the use of a prepared environment to meet the child's need to order and organize his world. Montessori's use of active involvement by the child in the learning process, her use of multi-age grouping, and her idea of self-correcting materials are features which have been incorporated in the open classroom.
>
> John Dewey, a major figure in the Progressive Education Movement, advocated many of the same principles associated with open education. The expression of individual pupil interest, learning through experience, and the acquisition of skills necessary for success in everyday life are but a few of the principles which Dewey found necessary for a sound learning experience. The presence of these principles, along with those expressed by Pestalozzi, Froebel, and Montessori, validate the concept of open and creative learning. It is not merely another education "fad" or a flash-in-the-pan approach, but an approach based on traditional philosophies relating to the education of young children.

Further support for a developmental approach to early childhood education can be drawn from the more recent work of researchers such as Gesell and Piaget. Piaget notes that children from four to seven years of age are in the preoperational stage of development. Children at this stage are rapidly acquiring language and are ususally eager to know and use new words. They are eager learners, constantly exploring, manipulating, and experimenting with the environment to learn more about it. They are becoming less self-centered and are gradually learning to see the viewpoints of persons other than themselves. Children of this age are limited by "before the eye reality" and can be fooled by sleight of hand maneuvers; therefore, they have difficulty in understanding that a substance or object may retain a particular characteristic (such as volume, length, or weight) even after visual or tactile alteration (Evans, 1975).

Children in the preoperational stage become fixed on one aspect of an object and have trouble seeing more than that one aspect. For instance, they can see that a group of boards could be grouped according to length or color, but not both at the same time. Thus there are difficulties with cross-classification, which is due to this fixation. Reasoning powers, in general, are just developing, and children are beginning to understand cause and effect.

Children at this stage make a fuzzy distinction at best between reality and make-believe, and often attribute human or animal characteristics to dolls and toys. Piaget noted that young children believe, for example, that both dreaming and waking are real. This, of course, is due to their fuzziness in distinguishing between reality and nonreality. Yet this inability to distinguish between reality and nonreality is exemplified in play, one of the most significant learning activities of children of this age. Because of their ability to enact make-believe sequences of thought, children can use play to help solve problems and try out new roles and activities, as well as to learn and grow. The importance of play cannot be stressed enough as a significant aspect of development that must be provided for in a good early childhood program (Evans, 1975).

Piaget has also observed that children of this age are becoming less egocentric and are easily influenced and molded by home and school activities. Attending school, being with other students, and being with the teacher can be strong motivators for the child. A nonthreatening, secure, and yet challenging learning atmosphere is important in utilizing these intrinsic sources of motivation. Young children need and respond to praise, smiles, encouragement, or any positive acknowledgement for a job well done. Because of their development away from a self-centered base, encouragement and esteem building help to strengthen the child's self-image and promote gains in learning.

Fine motor development, particularly in grasping, lacing, and finger manipulations, is important in developing handwriting skills. These children need experiences with large objects that can be easily manipulated, and, as practice increases their skill, they can move on to work with smaller, finer objects. The development of large muscle skills such as running, jumping, climbing, pulling, and pushing is also important.

Ames and Ilg, writing in the Gesell Institute's series on child development (Your Four Year Old, Your Five Year Old, Your Six Year Old), emphasize the importance of recognizing each child's individual pattern of growth. The child's chronological age may or may not be the same as his or her developmental age, and all aspects of each child's development may not be congruent. For example, children who are behaviorally very young may also be cognitively very gifted. Ames and Ilg point out the necessity for matching the learning environments of young children with their developmental readiness.

Day, in Early Childhood Education: Creative Learning (1983), describes the application of developmental theory to early childhood classrooms:

> The classroom environment in an open and creative learning environment must reflect these principles, and a great deal of planning must be done on the part of the teacher. In a learning environment with children ranging in chronological age from five to eight, and whose actual development span is far greater, a tremendous amount of diversified materials is necessary in order to meet individual needs, interests, and abilities. The environment must be one that provides for all areas of development, including the specific social, emotional, motor, and cognitive requirements of early childhood. Such an environment is based on the following beliefs:
>
> 1. Children grow and develop at different rates and [each child's] rate is separate and distinct from that of any other child. This rate of development is often unrelated to chronological age.
> 2. Children are naturally curious and eager to learn best when they are able to follow many of their own interests and desires to learn.
> 3. Learning is something a child does, rather than something done to him.
> 4. Play is a child's way of working and learning.
> 5. Children learn from each other: they learn to experience a sense of responsibility and achievement, to respect themselves and others, and to learn how to learn.
> 6. A rich learning environment, one deliberately designed with much to explore and to discover, is essential in helping young children learn basic skills. Concrete and sensory materials are a vital part of this environment, as they are basic learning devices for the young child.
> 7. Basic skill development is considered essential in an open and creative learning environment; however, a variety of creative approaches to teaching and learning, including an integrated day, is suggested.
> 8. The development of initiative and self-reliance is encouraged in an atmosphere of trust and structured freedom.
> 9. Each child is a unique individual and must be appreciated and valued for his individuality in all areas.
>
> An early childhood learning environment should be a comfortable, colorful place where children and adults can live together in a happy and relaxed atmosphere. This environment can be designed with large complexes or open-space schools where teachers work together in teams, or it may be designed for self-contained open classrooms. Physical structure does not determine openness; however, it may facilitate the process. The inside area should be large and carpeted, if possible, not only to

allow for fluidity of movement, but to provide a large space for group activities such as creative dramatics. The space can then be divided with use of movable walls or partitions to provide small spaces for special tutoring or quiet, individual, or small group activities. There should be many windows and there should be easy access to the outside, which is a vital part of the total learning environment.

OBJECTIVES

Although organizing early childhood programs based on developmental theory is clearly a very complex task, the filmstrips and manual present a step by step approach to implementing a developmental classroom. Emphasis is on both the organization of the curriculum and the classroom management techniques necessary to make the program run effectively.

After viewing the filmstrips and completing the manual, participants should be able to:

- Develop a rationale for a developmental program
- Describe the three curriculum organization components of a developmental program -- learning centers, skills groups, and units of study
- Describe the three classroom management components of a developmental program -- color coding, contracts, and internal and external discipline techniques
- Design plans for implementing the components in their own programs
- Develop assessment techniques for evaluating the success of the program.

AUTHORS

Barbara D. Day, Ph.D., is Professor of Curriculum and Instruction at the University of North Carolina at Chapel Hill. She is a former president of the Association for Supervision and Curriculum Development and of the North Carolina ASCD. In addition, she has been a teacher, principal, and assistant superintendent of schools. Author of more than 50 articles, research papers, and books, the most recent being Early Childhood Education: Creative Learning (1983), she was invited to co-author the fifth edition of Good Schools for Young Children with Leeper and Witherspoon.

Kay N. Drake is a doctoral student in Curriculum and Instruction at the University of North Carolina at Chapel Hill. She has been a teacher at the Seawell Elementary School in Chapel Hill for the past 11 years.

PROJECT PERSONNEL

Kay Drake and Markie Pringle are the early childhood teachers featured in this presentation. They designed the developmental classroom and some of the materials in the accompanying guide. Additional project personnel who have contributed to the philosophy and design of the program include Barbara Lawler, Principal, and Kelley Mathers, K-1 teacher at Seawell.

Early childhood graduate students who collected data in the classroom include Denise Hale, George Nyhart, and Joan Harrill. Students who helped develop the "Moving Around" science unit include Becky Bumpass, Kate Urquhart, Amy Craft, and Linda Biddix.

Materials (including slides, tapes, and written information) have been field tested through extensive use in workshops for school systems in North Carolina and with classes in the School of Education at the University of North Carolina at Chapel Hill.

Early Childhood Education:

Curriculum Organization
and Classroom Management
Filmstrip 1

The Six Components

The classroom in this presentation uses six major components in order to implement a developmental approach to learning. The curriculum components are learning centers, skills groups, and units of study; the classroom management components are the use of color coding, contracts, and internal and external methods of discipline. Each of the six components will be described in detail.

Participants will be able to meet objectives related to each of the six components after viewing the filmstrip and reviewing the accompanying sections of this manual.

SCRIPT

- The need for young children to have a developmental, experiential approach to learning has been established by the work of researchers such as Piaget, Gesell, and Montessori.
- But creating experiential environments for young children is a very complex task.
- To function effectively, early childhood classrooms have to be organized and managed systematically.
- This presentation focuses on curriculum organization and classroom management for effective early childhood programs.
- The three curriculum organization components designed to meet the developmental needs of young children are learning centers, skills groups, and units of study. The three classroom management components designed to coordinate the functioning of young children in early childhood classrooms are color coding, contracts, and internal and external discipline techniques. Details concerning these six components are in the accompanying manual.
- This presentation will show you a classroom where the children come from diverse ethnic and socioeconomic backgrounds. The children who attend the school live in its attendance area. A few are educationally handicapped and are mainstreamed into the regular classrooms.
- While a variety of staffing plans are feasible in developmental programs, in this classroom two teachers and two aides work with 52 five- and six-year-olds. Each teacher is responsible for coordinating the activities of a home base group of 26 children.
- Let's look first at the three components of curriculum organization -- learning centers, skills groups, and units of study.

- Learning centers are designed to give children an experiential approach to learning and to provide for differences in children's learning styles.
- There are 16 learning centers in this classroom: 14 centers within the classroom area, including the TV center located in the teacher workroom; and two centers outside the classroom area--the library and the outdoor center, which features tools, seesaws, a sand area, an easel, and the water table.
- The centers provide children the opportunity to develop skills, explore a variety of materials, and make decisions.
- At the science center children learn about the physical and natural sciences. The unit on vertebrates has Gary's attention. A unit about domestic animals features Midnight the rabbit.
- "Animal Habitats" is the subject of this science unit.
- In the research center children use dictionaries, encyclopedias, and a microcomputer. Here the children learn reference skills, such as alphabetizing, and gain additional knowledge about the units being studied.
- Ellen is working on her research. Her card is correlated with the topic being studied in science. Other research task cards may refer to seasonal topics, such as Halloween or Columbus Day.
- The listening center has tapes of children's literature with "read along" paperbacks, as well as tapes of children's music. Materials in the listening center are correlated with the science and social studies topics whenever possible. Dinosaurs have everyone occupied at the moment.
- The reading center offers a variety of books to encourage independent reading.
- The reading center reinforces the skills taught in reading groups. Here Paul shares a story with Winnie-the-Pooh.
- In the writing center children have the opportunity to use materials and task cards that improve fine motor skills, reinforce handwriting skills, and encourage creative writing. Jennifer is practicing some Halloween words.
- Lisa and Mark are using "story starter" cards for inspiration.
- The social studies center focuses on people and places. A unit on "The World of Work" includes lessons on earning and spending and a chance to explore various occupations.
- The "Foods and Nutrition" unit gives Alex the chance to practice some basic cooking skills.
- "All About Me" emphasizes each child's individuality.
- The math center and . . .
- . . . the language center each contain games and activities that help the children apply their skills.
- Children with different levels of expertise often help each other play games and solve problems.
- The block center encourages construction and dramatic play.
- Robbie and Sally are ready to put out a fire.
- The outdoor center allows for a wide range of learning experiences. Outdoors the children have access to tools and water. . .
- . . .an easel, the sand table, and the seesaws.
- The puzzle center has many activities to develop psychomotor and perceptual skills. Jenny, Matthew, and Laura put together an intricate puzzle.

- The dramatic play center encourages the children to use their imaginations.
- Karen and Tracey become very grown up with their costumes and props.
- The puppet center is another area that encourages imaginative play. Kermit and the Count star in this production by Matt and Paul.
- Children express themselves visually in the art center.
- Materials available in the art center include paint, watercolors, clay, crayons, scissors, and paste.
- Special art projects, such as paper bag puppets, are also planned each week to give the children a variety of experiences.
- The puppet task card illustrates each step in making a puppet.
- The library is used as a learning center. The children put their names on the library chart when leaving the classroom.
- Children are encouraged to use the library each week for a variety of assignments. Claire and Kelley are reading Ranger Rick and Sesame Street.
- Educational television, located in the teachers' workroom, is also included as one of the 16 learning centers. Children watch programs that supplement their learning in the various skill areas.
- The learning centers create an environment for young children that encourages experiential learning. Children develop cognitive, psychomotor, and affective skills through their work in the centers.
- Skills groups are the next curriculum organization component. Skills groups are used as a strategy for direct instruction in a number of subject areas, such as reading and math.
- The carpeted steps and the tables in the home base area are used for both large and small group instruction.
- Children are grouped for math and reading based on their needs and abilities. Heterogeneous groupings are used for instruction in physical education, art, social studies, science, and music.
- Children meet daily for reading. Phonics, new vocabulary, and basic language skills are taught. Then written tasks are explained and assigned.
- While the children are completing their written tasks at the home base tables, the teacher meets with one or two children at a time for oral reading, word study, and comprehension skills.
- Children who are not yet meeting with their skills group continue to work in centers.
- Each child's reading program is planned to meet his or her individual needs. The language experience approach is one method used for teaching reading and language skills.
- The basal reader approach is also used in this classroom and works well for many children.
- Children who are independent workers benefit from self-paced approaches, such as individualized reading kits.
- Math groups also meet daily. The teacher introduces games from the math center . . .
- . . . reviews facts, introduces new math concepts, and assigns written work.
- Children complete their math papers at the home base tables. Children not meeting with their math group until later continue to work in the learning centers.

- Physical education skills groups are scheduled daily. In physical education, children have both the opportunity for structured activities. . .
- . . .and time for free play.
- The last curriculum organization component is the unit of study. A unit of study includes the content and learning activities that are planned to teach a specific topic. Social studies and science concepts are taught through the use of units.
- The components of a unit of study include concepts, instructional objectives based on these concepts, lessons designed for use with large groups, and activities planned for learning centers. Evaluation of the children's learning is built into each objective through teacher observation of the children's performance and teacher analysis of the children's written work.
- For each unit, children have access to a variety of materials, including manipulatives, games, and written tasks on several levels.
- Long range plans involve a two-year sequence of unit topics. In a multi-age classroom, science units taught one year will not be repeated the next. A two-year sequence of unit topics ensures a diversity of experiences for children who are in the classroom as both five- and six-year-olds.
- Management is the key to a well-organized classroom. Color coding, contracts, and discipline are the management components that make this program run smoothly.
- The systematic use of color helps the child manage his or her day. Color coding enables children to find their way around the classroom and to select appropriate activities.
- Color coding has three different applications. It is used to identify centers, to classify books in the reading center, and to organize games and activities.
- Each center is assigned its own color. For example, the reading center is identified by its blue chart and the blue clothespins attached to it. The color-coded charts provide visual cues that help the children locate the different learning centers in the classroom.
- Traffic patterns in the classroom are controlled by assigning a set number of clothespins to each center. The clothespins also serve as "tickets" that allow children to enter a center. For example, a total of six children may use the math center at one time, so six clothespins are on the math chart. If a clothespin is available, the child unclips it from the chart and wears it while working in the math center. When leaving, the child replaces the clothespin on the chart.
- In the reading center, books are color coded. Children can select a book, read it, and reshelve it easily using the color-coding system.
- Organization of games and activities is simplified by the use of color-coded stickers. Yellow, red, and green stickers are attached to each game or activity and to the shelf where it belongs.
- This use of color coding helps children to find their assigned games and to clean up independently. Maia is playing the game with the green square stickers from the language shelf.
- Color coding also provides a useful system for assigning appropriate tasks. Materials can be classified into levels of difficulty and then color coded accordingly. For example, a game with a yellow sticker is less difficult than a game with a red or green sticker.
- Another management component is the contract, a written plan for the child's day.

- The contract helps ensure a balanced program for each child. One-third of the day is spent with the teacher in skills groups, one-third on independent activities planned by the teacher, and one-third on the child's own free choice activities.
- Each morning Steven fills out his contract. He refers to it to determine which centers to go to and which tasks to complete.
- For example, the contract assigns children to centers such as science, where they will learn new concepts, and to art for creative activities.
- The contract includes center activities, such as this writing assignment, that reinforce the skills being taught in reading and math groups.
- Teacher-directed skills groups, including P.E., reading, and math, are part of each contract.
- The contract format also allows the child to select free choices that reflect his or her own special interests.
- A daily conference period is planned in order to evaluate the child's contract work.
- There are four types of contracts designed to accommodate the developmental levels of the children. Level 1 contracts are the easiest, and require children to read symbols and match colors. In Level 2 children advance to a contract that assigns specific tasks, using the color-coding system for games and activities.
- Level 3 is a more difficult contract that requires beginning reading and writing skills. In Level 4 children with more advanced skills use a contract that requires keeping a written diary of the day's activities.
- Discipline is the third component of classroom management. Discipline has two aspects, external and internal. The external aspect of discipline refers to how the child's classroom environment influences his or her behavior. The internal aspect of discipline refers to the child's own ability to behave in appropriate ways.
- There are four techniques teachers can use to minimize discipline problems in the classroom. First, teachers need to provide a developmentally appropriate learning environment. An active, involved child is usually not a discipline problem. Second, teachers should clearly communicate their expectations. When children know what is expected of them, they are less likely to present discipline problems. Third, teachers need to be consistent in their use of classroom rules; and fourth, teachers need to provide frequent feedback to each child.
- In this classroom children know that they are expected to stay on task. Using contracts is a strategy that fosters this on-task behavior. Contracts tell children exactly where they should be and what they should be doing. Contracts also help children handle their own transitions from center to center.
- The children's correct use of materials is promoted by the explanation of any new learning center games or activities in home base group each day. Teachers also work directly with the children in the centers for a 45-minute period each morning as the children use the materials.
- Four rules are used consistently. Children must have a job, use soft voices, walk as they move around the classroom, and respect the feelings and property of others. If a child cannot conform to these four easy-to-follow rules, then his or her activities are restricted. As the child reaches a consistent level of compliance with the rules, he or she is phased back into the regular activities.
- Feedback is given to the children at many times during the day. When children finish a project, they are expected to have it checked by either the classroom teacher or an aide. If work is in error, children correct it before moving to other tasks.

- At the end of the school day, each child meets with the teacher for an individual conference. Feedback is given on written work and on the child's performance in centers. The contract is the guide for evaluating the day's work. All of the child's papers are stapled to the contract. This packet is sent home as a daily report to parents.
- Children in this program are provided with a variety of interesting activities on their developmental level. They select and initiate many of their own activities, and they know where they should be and what they should be doing.
- The success of the program is based on combining curriculum components (learning centers, skills groups, and units of study) with management components (color coding, contracts, and discipline). These six components create a learning environment that is efficient and effective for each child.

CURRICULUM ORGANIZATION COMPONENT #1: LEARNING CENTERS

According to Leeper (1974), the main distinction of the learning center approach is that it emphasizes cognitive growth and provides for self-evaluation. It also provides for the affective growth of the child by encouraging an atmosphere of trust and security.

Learning centers are specified areas in the learning environment designed by the teacher, the students and the teacher, or by the students that contain a variety of learning activities and media to enhance the development of concepts, themes, topics, skills, or interests. The experiences in a learning center may be adapted to the child's particular learning style, maturity, and experiential background, thus providing an approach to individualizing instruction for more effective education. In essence, learning centers provide the core of an early childhood environment.

Objectives

- Develop a rationale for the use of learning centers
- Describe effective learning centers, including the use of multi-level materials
- List appropriate learning centers for young children
- Determine the appropriate use of learning centers in specific programs
- Establish both short- and long-term goals for developing learning centers
- Design a classroom environment that uses learning centers
- Evaluate a good learning environment for young children.

Why Learning Centers Are Important

In a learning center designed to accommodate a variety of learning styles, children can manipulate objects, engage in conversation and role playing, and learn at their own levels. The center materials are drawn from the basic skills program of the classroom as well as from the themes and units being pursued. The centers supply opportunities for learning new skills, reinforcing or practicing skills already acquired, integrating a variety of subject matter, and utilizing physical and social skills.

Learning centers enable young children to develop independent learning skills, as well as to acquire and improve the skills and knowledge on which future learning can be built. Such centers require time and creativity on the part of both teachers and children, as they must be carefully planned and organized to be challenging and interesting.

Since differences in rates and modes of learning exist in any group of children, learning centers are designed to accommodate these differences. Some activities in a learning center may be required of all students, some may be required of some students but not others, and some may be optional. Determination of required activities is based on the children's differences in ability, maturity, experience, and interest.

Conditions for Effective Learning Centers

There are certain conditions that should be met if learning centers are to be most effectively utilized in a good early childhood program.

1. An effective management system must be developed and well understood by the teacher and children.
2. The teacher must genuinely know the children and their abilities, achievement levels, previous experiences, and overall maturity (physical, mental, emotional). In addition he or she must know the goals and objectives of a good early childhood program and apply these goals in designing the curriculum.
3. The centers must be attractive and well organized, provide for a variety of learning styles and skill levels, include necessary supplies and resources, and provide for feedback through self-correcting materials of various types.
4. Children must be taught how to effectively use the center materials and equipment.
5. Individual and group planning, guidance, and evaluation of center activities must be provided.
6. The children must possess the necessary skills and prerequisite information for effective utilization of the centers. They must understand the purposes of their activities; be able to exercise self-discipline; and, depending on their reading or computational level, be able to keep good records of their activities.
7. The activities in the centers should have educationally valid purposes. They should reinforce skills, concepts, and knowledge; be integrated with other appropriate skills and concepts; and be based on diagnosis of the strengths, weaknesses, and needs of the children.

What a K-3 Developmental Learning Environment Looks Like

An effective early childhood learning environment is an informal, warm, busy place where both discovery and direct teaching are paths to learning. Children must be seen as competent, trustworthy, and wanting to learn. The teacher acts as a guide in the development of the child in the academic, creative, social, and emotional areas.

Children are often free to choose what, how, and when they want to learn, and when guided by a sensitive teacher can work on their personal strengths and weaknesses individually, with a friend, or with a small group.

Physically, a developmental learning environment should be a place where the comfort of the child is considered. Management and order must be emphasized. Instructional resources should be in easily accessible places that can be recognized by the child. Provision should be made for movement through the use of floor space, small tables, halls, walls, and outside work areas. The room and the equipment should be clean and respected, yet usable. A variety of noise levels and emotional needs can be taken care of through creative, wise arrangement of centers.

The centers should all be inviting places where children can feel secure while being challenged by new concepts and reinforced by successfully completing activities dealing with previously acquired skills. Centers may be arranged according to subject matter, but no branch of learning should be seen in isolation. Centers and activities must all be interwoven so that specific concepts can be generalized. Some centers, like those that deal with language arts, science, and math, receive special attention and should include many materials for a variety of different learning levels. Teachers are finding, however, that it is not difficult to add centers that in a more traditional or restrictive classroom might be seen as frills: the creative arts, creative dramatics, blocks, social studies, woodworking, outdoor activities, sand and water, and special emphasis centers. They are finding that all of these so-called extras help to teach the traditional three Rs.

Below is a checklist of open and developmental characteristics that teachers may use to determine whether they believe in a developmental approach with learning centers.

Teacher's Philosophy Checklist

1. Do I believe in the nine open and creative learning principles on page five in the Overview section of this manual?
2. Do I provide a classroom atmosphere of warmth, security, and challenge?
3. Do I believe that my role as a good teacher is to guide children into learning, to serve as a facilitator, and to provide direct instruction?
4. Do I believe in teachers working together to facilitate planning, whether in team teaching arrangements or as colleagues in curriculum development for self-contained classes?
5. Do I support multi-age grouping to facilitate peer learning and reduce pupil turnover each session?
6. Do I believe in and utilize an integrated day?
7. Do I encourage and support parent involvement in my classroom learning environment?
8. Do I use learning centers containing a wide variety of materials?

9. Do I evaluate my learning centers in terms of the following categories: a) objectives; b) environmental resources; c) materials (commercial and teacher-made); d) suggested activities; and e) evaluation?
10. Are my learning center activities self-correcting and multi-leveled?
11. Is our management system clearly understood and adhered to by both children and teacher, so that our learning environment is well organized?
12. Do I believe in and use curriculum and individual skill area contracts, as well as individualized contracts based on diagnosis?
13. Do I provide for choices of activities for the children, as well as for their required tasks?
14. Do I have multi-level materials coded by color and/or number to facilitate classroom organization and child responsibility?
15. Are the learning centers labeled and are the activity directions provided in both visual and written form?
16. Do I regularly diagnose each child's abilities, motivation, preferred physical conditions, perceptual strengths, and preferred learning styles?
17. Do I provide for individual, small group, and total group activities?
18. Do I encourage children to share and/or display their own work?
19. Are my children taught to respect and care for their learning environment and each other?
20. Do I have ample storage facilities, and do I creatively utilize all available space for centers, including hallways, the classroom, and outdoors?
21. Do I carefully introduce the children to each learning center, its materials, and the reason why this center is important?
22. Do I provide the opportunity and/or encourage children to add to or set up their own learning areas?
23. Do I provide for a variety of noise levels, both quiet and not so quiet areas?
24. Do I utilize community resources and provide field trips for the children?
25. Do I provide for the development of self-reliance, self-discipline, and self-confidence for each child?

In conclusion, a learning center approach as proposed by Leeper (1974), Weber (1971), Day (1975), and others is representative of sound educational practices for six major reasons:

1. A good early childhood program must have a focus with clearly defined goals and objectives based on well-thought-out values. A developmental environment meets this criterion. Its primary goal is to provide a succession of experiences whereby each child can have the opportunity to develop at his or her own rate by helping each child to:
    a. Gain academic learning and begin to develop good study habits
    b. Develop a positive self-concept
    c. Develop the ability to make wise choices
    d. Learn to communicate -- listening, speaking, reading, and writing
    e. Learn individual and group values -- respecting, helping, and understanding others.

2. A developmental program is responsive to the needs and capabilities of the learners. Through learning centers the environment allows for:
    a. Attention spans of varying lengths
    b. Children's development from an egocentric stage to a more peer-oriented stage
    c. Success of some kind for each child
    d. Sensitivity to and appreciation for individual differences
    e. Varying degrees of muscle control and reaction time.
3. A developmental program is responsible to society because it develops those skills that children will need to function in the real world as adults. Children learn:
    a. To be responsible for their own actions and to recognize the rights of others
    b. To clarify concepts
    c. To talk things over and to follow through once a plan is made by common consent.
4. Possibly more than any other approach, a developmental program that uses learning centers has an intellectual content based on inquiry and discovery. Academic learning is developed through successive experiences in developmental sequences that are appropriate for each child. The content is presented so that:
    a. It is integrated, rather than presented as isolated subject matter
    b. It proceeds from the immediate environment of the child
    c. The child has time and opportunity to express himself or herself through a variety of media and materials
    d. The child may be actively involved and use his or her whole body
    e. Opportunity is provided for the development of important attitudes about self, home, and school.
5. Facilities are available, adequate, and arranged in order to do a good job. The facilities include:
    a. Individual storage space and a sense of privacy for each child
    b. Open shelves that contain attractively arranged and easily accessible materials for children's use
    c. Space that is planned with special uses in mind -- small cozy areas for reading; quiet independent work areas; and larger, more spacious areas for total group activities such as story time or class meetings
    d. A variety of materials and equipment appropriate for children with many levels of learning.
6. A developmental program, as any other, is dependent upon good teachers. Good teachers often are attracted to this program because of the ideals inherent in this approach. These are teachers who:
    a. Include both sexes
    b. Possess necessary teaching and learning skills
    c. See themselves as guides and facilitators of learning
    d. Think well of themselves and are therefore able to think well of others
    e. Are friendly, warm, and able to provide supportive relationships
    f. Trust children and show respect and concern for them.

How to Begin a Learning Center Approach

Using a learning center approach may appear to be overwhelming at first. The following eight steps help classroom teachers get off to a good start:

Step 1. Examine your philosophy. What is your ideal classroom?

Step 2. Examine your resources -- time, money, staff, materials, space, philosophical support.

Step 3. Examine your restraints. Restraints may evolve from a lack of such resources as time, money, staff, materials, space, or philosophical support. Other restraints may include curriculum regulations, regulations concerning use of space, and so forth.

Step 4. Develop realistic goals. A learning center approach takes time and effort to implement effectively. Don't expect to achieve your goals overnight. Determine where you see yourself on the following continuum and where you would like to be eventually.

A Continuum for the Use of Learning Centers

No Centers	3, 4, or 5 Centers	5-8 Centers	8-10 or More Centers	Entirely Centers
1	2	3	4	5

1. No Centers. Classroom designed around other methods of instruction.
2. 3, 4, or 5 Centers. Centers are supplementary to the regular program. Centers are set up around the edges of the classroom. Centers chosen are easily maintained -- for instance, a reading corner, listening center, art area, creative writing corner, or puppetry corner. This approach is a good way to begin using learning centers in a classroom.
3. 5-8 Centers. Children may spend most of their day working at assigned desks or tables, but may also have a special "centers" time when everyone, including the teacher, works in the learning centers. Some centers may carry the curriculum for a specific area; that is, art, psychomotor skills (puzzles), or creative writing experiences may be planned and taught primarily through the use of these centers. Other centers, such as reading, math, and language arts, may support the regular curriculum. Some centers are easily maintained, while others require extra planning and materials.
4. 8-10 or More Centers. The classroom includes work/study areas for skills groups, a home base area for large groups, and a variety of learning centers. The centers carry a large part of the curriculum, with children moving among the centers during the entire day. Teachers work with children during a centers teaching period each day and also work with each child daily in reading and math skills groups. Planning for the centers curriculum is extensive and requires as much time as planning for skills groups. The science and social studies curricula are taught through the use of centers. Children apply their skills in the content areas through the use of centers. Constructing, creating, and imaginative activities are presented in the learning centers. Children use a management system such as contracting to help structure their learning (see Figure 1).

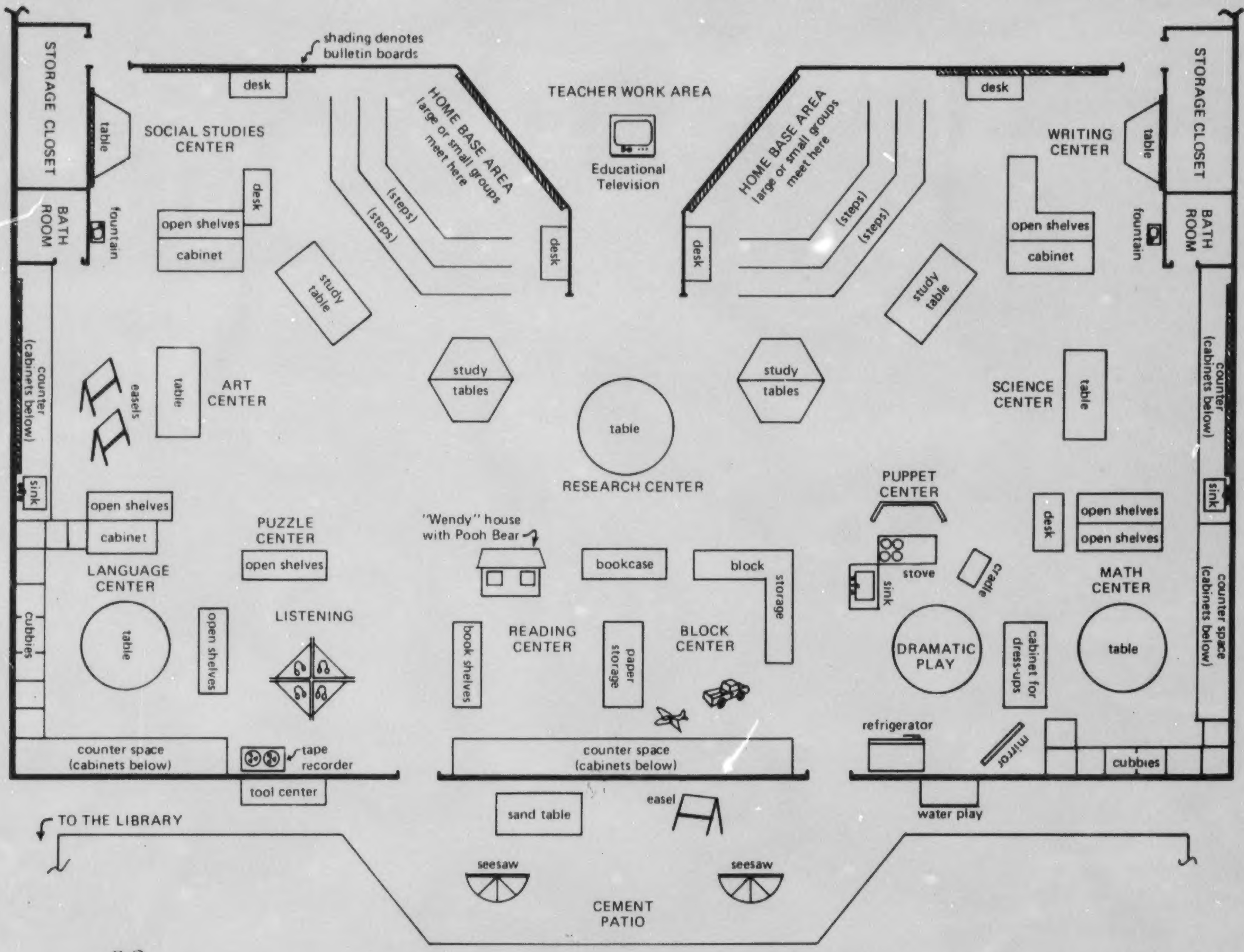
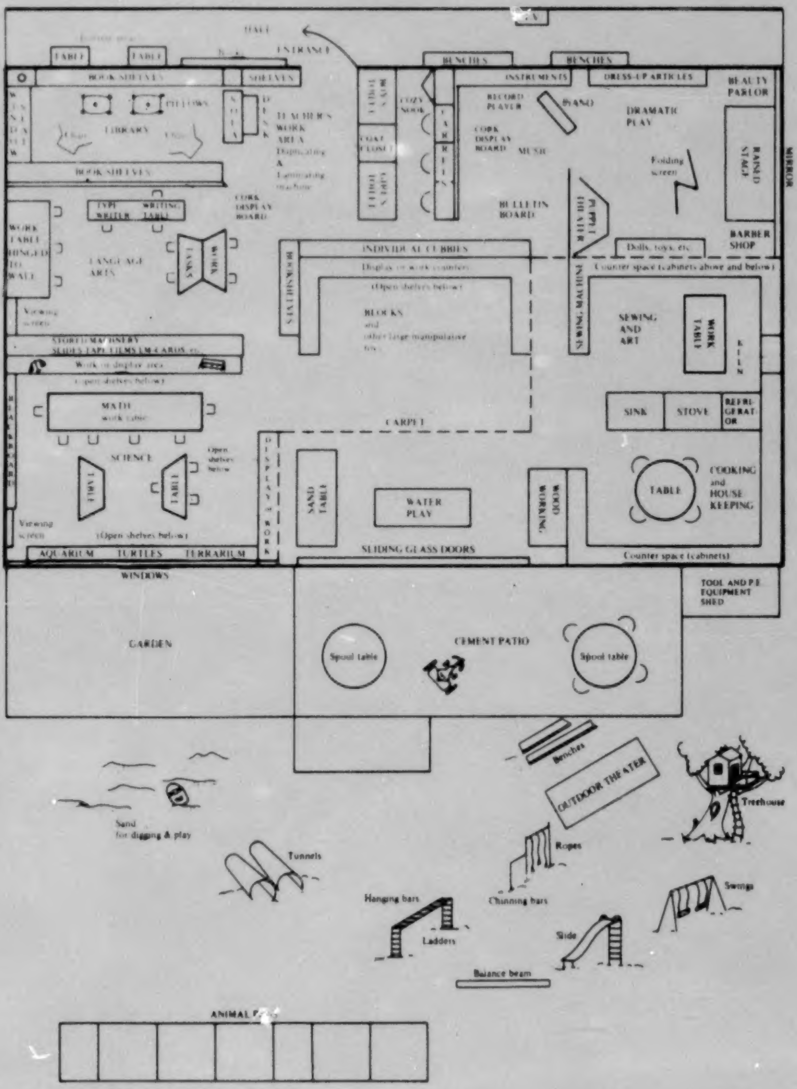

shading denotes bulletin boards
STORAGE CLOSET
table
desk
SOCIAL STUDIES CENTER
HOME BASE AREA large or small groups meet here
(steps)
(steps)
TEACHER WORK AREA
Educational Television
HOME BASE AREA large or small groups meet here
(steps)
(steps)
desk
WRITING CENTER
table
STORAGE CLOSET
BATH ROOM
fountain
desk
open shelves
cabinet
desk
desk
open shelves
cabinet
fountain
BATH ROOM
study table
study table
counter (cabinets below)
easels
table
ART CENTER
study tables
study tables
table
SCIENCE CENTER
table
counter (cabinets below)
RESEARCH CENTER
sink
open shelves
cabinet
PUZZLE CENTER
open shelves
"Wendy" house with Pooh Bear
bookcase
block storage
PUPPET CENTER
stove
sink
cradle
desk
open shelves
open shelves
MATH CENTER
sink
counter space (cabinets below)
LANGUAGE CENTER
table
cubbies
open shelves
LISTENING
book shelves
READING CENTER
paper storage
BLOCK CENTER
DRAMATIC PLAY
cabinet for dress-ups
table
refrigerator
mirror
cubbies
counter space (cabinets below)
tape recorder
counter space (cabinets below)
tool center
sand table
easel
water play
TO THE LIBRARY
seesaw
seesaw
CEMENT PATIO

Figure 1. Map of Classroom with 8-10 or More Learning Centers.

5. Entirely Centers. Classroom is composed entirely of learning centers, with study areas set aside for small group and individual work. Teachers work as facilitators, moving among the children as they work. Extensive recordkeeping -- such as individual prescriptions, contracts, checklists, anecdotal records, and so forth -- is used to coordinate the learning of each child. Children choose much of their own work. Skills groups are constantly formed and re-formed according to the children's needs (see Figure 2, from Day, 1975, p. 195).

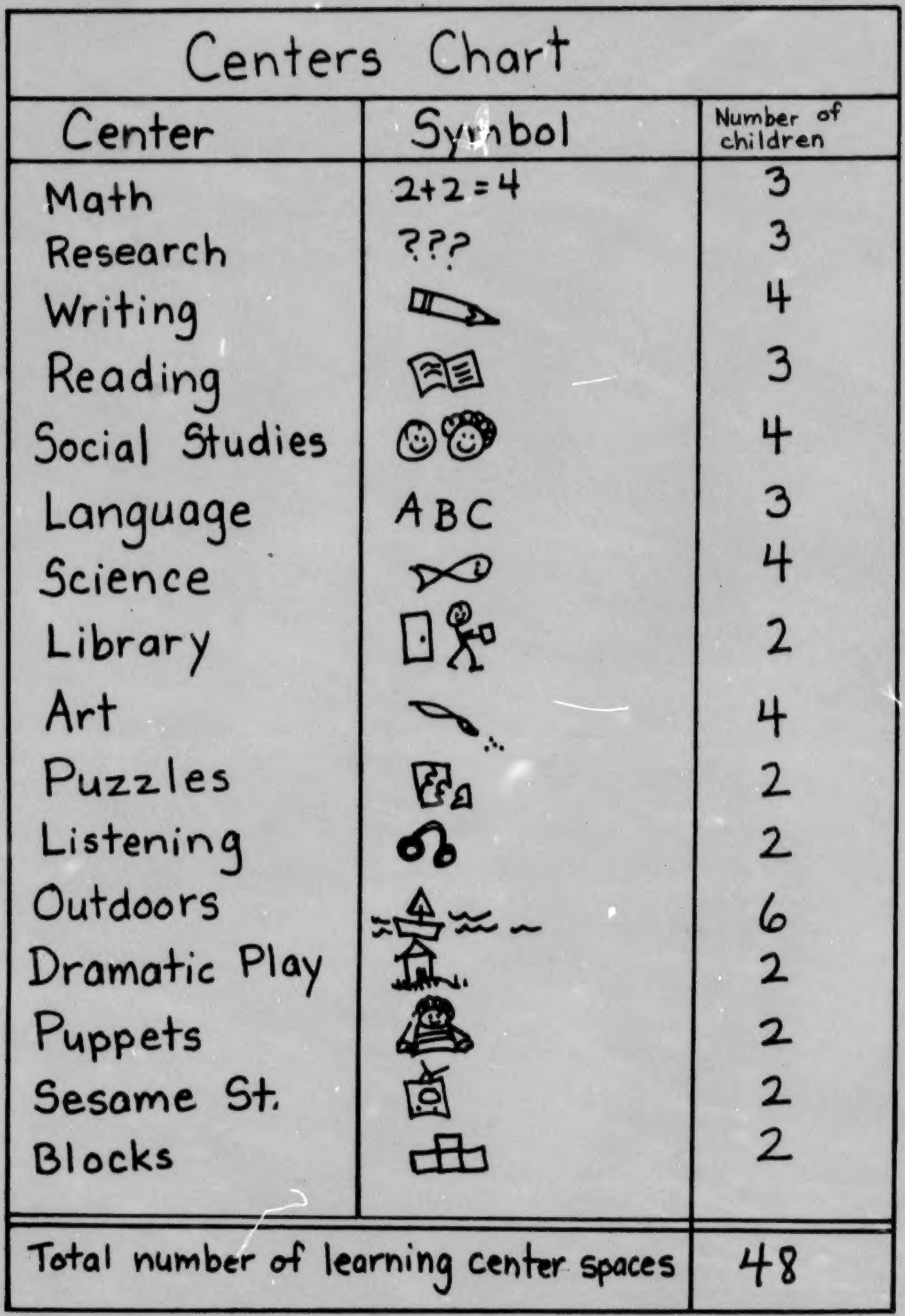
Figure 2. Map of Classroom Structured Entirely Around Learning Centers.


HALL
ENTRANCE
TABLE
TABLE
BOOK SHELVES
SHELVES
PILLOWS
LIBRARY
Chair
Chair
BOOK SHELVES
DESK
TEACHER'S WORK AREA
Duplicating & Laminating machine
CORK DISPLAY BOARD
TYPEWRITER
WRITING TABLE
WORK TABLE HINGED TO WALL
LANGUAGE ARTS
TASKS
WORK
Viewing screen
STORED MACHINERY SLIDES TAPE FILMS LM CARDS etc.
Work or display area
(Open shelves below)
MATH work table
SCIENCE
TABLE
TABLE
Open shelves below
Viewing screen
(Open shelves below)
AQUARIUM
TURTLES
TERRARIUM
DISPLAY OF WORK
WINDOWS
BENCHES
BENCHES
BOYS TOILET
COAT CLOSET
GIRLS TOILET
COZY NOOK
INSTRUMENTS
DRESS-UP ARTICLES
BEAUTY PARLOR
RECORD PLAYER
PIANO
DRAMATIC PLAY
CORK DISPLAY BOARD
MUSIC
Folding screen
RAISED STAGE
MIRROR
BULLETIN BOARD
PUPPET THEATER
Dolls, toys, etc.
BARBER SHOP
INDIVIDUAL CUBBIES
Display or work counters
(Open shelves below)
BOOKSHELVES
BLOCKS and other large manipulative toys
CARPET
Counter space (cabinets above and below)
SEWING MACHINE
SEWING AND ART
WORK TABLE
KILN
SINK
STOVE
REFRIGERATOR
SAND TABLE
WATER PLAY
WOOD WORKING
TABLE
COOKING and HOUSE KEEPING
SLIDING GLASS DOORS
Counter space (cabinets)
TOOL AND P.E. EQUIPMENT SHED
GARDEN
Spool table
CEMENT PATIO
Spool table
Benches
OUTDOOR THEATER
Treehouse
Sand for digging & play
Tunnels
Ropes
Hanging bars
Chinning bars
Swings
Ladders
Slide
Balance beam
ANIMAL P

Step 5. Decide on specific centers for your classroom. List the centers, adding a symbol to represent each center and the number of children each area can comfortably accommodate, as in Figure 3.

Next, total the number of spaces available in the centers at any one time. The classroom with the centers listed in Figure 3 has 48 spaces. The total number of spaces available should exceed the total number of children using the centers at any one time.

Figure 3. Centers Chart.



Centers Chart

Center	Symbol	Number of children
Math	2+2=4	3
Research	???	3
Writing		4
Reading		3
Social Studies		4
Language	ABC	3
Science		4
Library		2
Art		4
Puzzles		2
Listening		2
Outdoors		6
Dramatic Play		2
Puppets		2
Sesame St.		2
Blocks		2
Total number of learning center spaces		48

Extra center spaces facilitate the movement patterns of the children as they finish their tasks in one center and need to move to another center. From 25 to 30 children could easily work in the number of spaces provided by the learning centers in this example.

Step 6. Diagram your classroom. Start with "givens" such as wet areas and sinks, cubbies, teaching stations, carpeted areas, and study tables; then add the learning centers. Consider:

1. Noisy and quiet centers. It may be disruptive to have all the noisy centers in one area of the room.
2. The number of chiildren using each center. Very busy areas may need to be equally distributed around the room.
3. Traffic patterns. The ebb and flow of children from one area to another works best if the total number of learning center spaces is evenly distributed over the entire area.
4. What happens when you are teaching in the learning centers. If science and art need the most adult help, perhaps they need to be in close proximity to one another, unless you can count on another adult, such as an aide or teammate, working in the classroom with you.
5. Maintain visual contact with the centers that will need the most adult interaction during the day. A reading nook may be semihidden in a corner, but a busy block center requires more supervision and may need to be easily visible from your teaching station.

Step 7. Set up your classroom, try out your organization, and revise as necessary. It's difficult to predict all the variables until active children have been at work in a classroom. Don't let the mechanics of establishing functional learning centers discourage you.

Step 8. Consider organizational techniques for individual centers.

1. Start with a few materials in each center. Add more items as the children become proficient in working independently and carefully.
2. Design materials for independent use by the children. Use clearly worded or illustrated task cards to remind children of the steps in a project or experiment. Use self-correcting activities when possible. Invest in sturdy items that can be used in a number of different ways by young children, such as colored blocks and wooden and rubber letters and shapes.
3. Design easy access to the materials. Shelves with cubbies are extremely efficient. Place one item in a cubby or specific spot on a shelf or counter.
4. Organize a system for using the materials. Daily contracts are a mechanism that help structure children's center experiences. Color coding materials provides a means for easy recognition of assigned tasks and easy clean up by young children. (Details concerning the development of daily contracts and color coding of materials will be given later in this manual.)
5. Be sure each center is equipped with any necessary materials before the day begins. Scissors, paste, crayons, paper, and so forth can each have a special spot in the center.
6. Incorporate display areas for children's art, books, stories, experiments, and so forth into each appropriate center.
7. Consider the natural habitat for specific centers. Science and art may need a sink area with tiled floor space. Blocks, puzzles, and other manipulatives may work best on a carpeted area. Sand and water play are more easily managed outdoors.

8. Clearly define each center space by the arrangement of the furniture. Include a chart with the name of the center and the number of children allowed in the center at any one time; color-coded charts help children locate specific centers. For instance, the yellow chart indicates the research area and may also have color-coded clothespins attached as tickets for entering the area. (See Classroom Management Component #1: Color Coding, page 37, Figure 16.) If children use folders to keep their work organized, a box next to the center entryway is a convenient place to store the folders while the children are at work in the center.

9. Introduce each new center activity to all the children at group time before adding it to the appropriate center. Emphasize correct care of the materials at the same time. During group time teach mini-lessons of about ten to fifteen minutes in length in order to expand the children's understanding of their center work on certain topics such as dinosaurs or transportation.

10. Plan to give consistent feedback to the children on their work in the centers. Establish ground rules as needed; for instance, designate specific places to put finished products or work that the teacher will review later, or plan for the child to get his or her paper or project checked by an adult before leaving the center to go to another area. Conference with the children at the end of each day about their work.

11. Communicate clear expectations to the children about their responsibilities for care of materials, clean up, and so forth. Be explicit about what can be done in each center; for instance, can the rocket be ridden outside of the block area? Can water be used in the dramatic play area?

12. Orient children to the use of learning centers. For details, see page 43 under Classroom Management Component #2: Contracts.

13. Plan a storage and retrieval system for organizing materials for specific units and centers so that they can be used over and over. Cardboard boxes labeled "Dinosaurs," "Fall," and so forth, placed on open shelves, work nicely.

Task Cards

Task cards can be used to orient young children to learning center activities. Task cards should explain the activity to the child both visually, with the use of graphic symbols, and verbally, with the use of a few easy-to-read phrases.

Figure 4 is an example of an art task card that explains and illustrates how to make paper bag puppets.

Figure 4. Art Task Card.

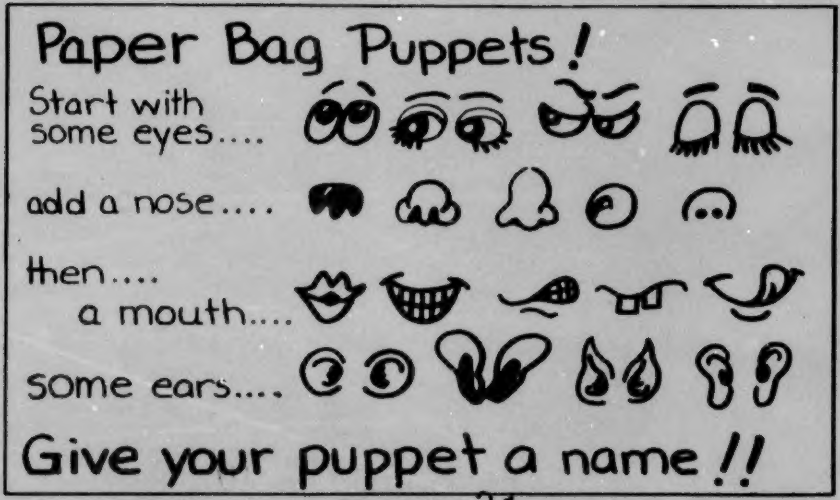
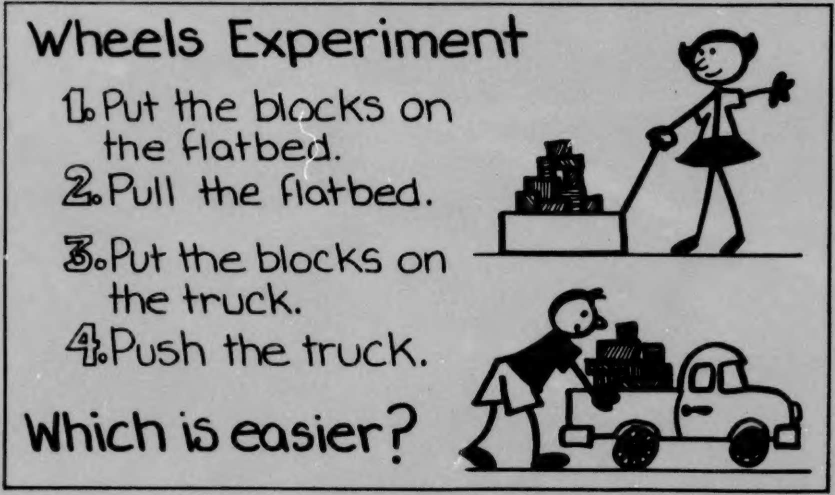

Paper Bag Puppets!
Start with some eyes....
add a nose....
then.... a mouth....
some ears....
Give your puppet a name!!

Figure 5. Science Task Card.



Wheels Experiment

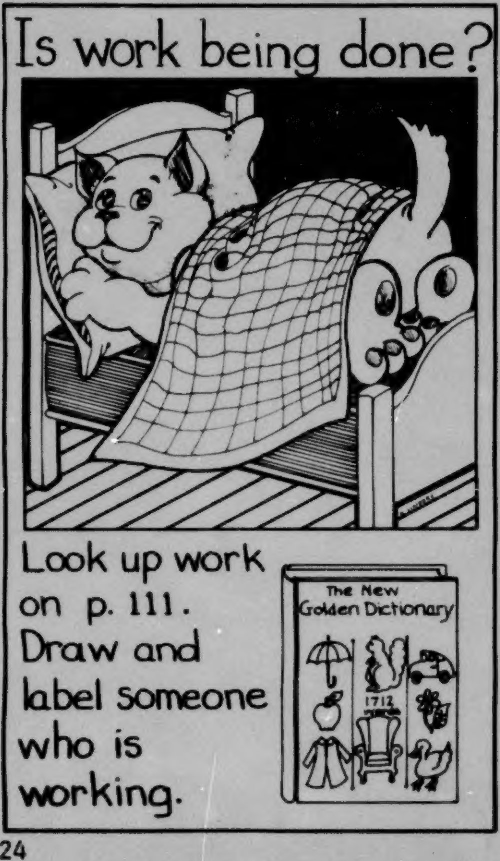
1. Put the blocks on the flatbed.
2. Pull the flatbed.
3. Put the blocks on the truck.
4. Push the truck.

Which is easier?

The science task card from a physical science unit on simple machines (Figure 5) explains and illustrates how to do an experiment about wheels.

The illustrations on research and writing center task cards need to be clear and precise in order for young children to use them effectively. The cards need to be designed for children with different levels of skill development.

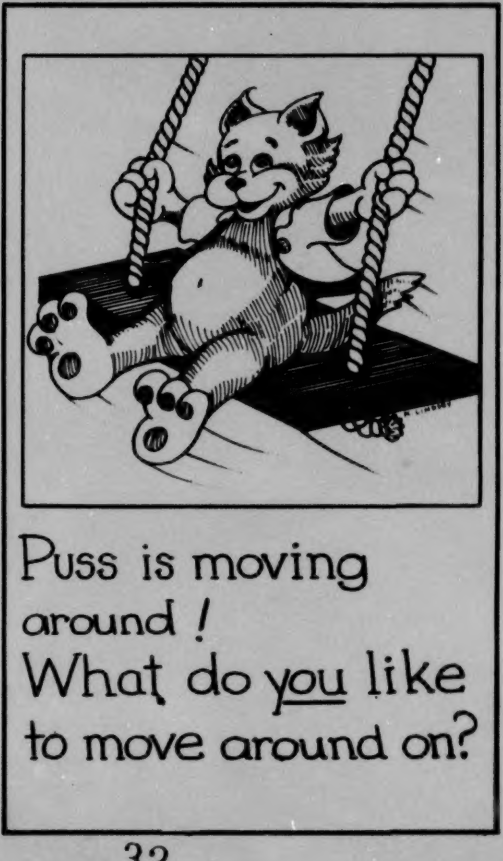
Figure 6. Easy Research Card.



Is work being done?

Look up work on p. 111. Draw and label someone who is working.

Figure 7. Easy Writing Card.



Puss is moving around!
What do you like to move around on?

Cards at the easiest level, for children with no reading and writing skills, can include manipulatives, drawing, coloring, matching, puzzles, games, dot-to-dot, and mazes. Keep written instructions simple. No writing should be required of the child. If the activity is a puzzle or other manipulative, include on the card instructions that ask the child to draw and color a picture about the activity. Figure 6 is an example of an easy research center task card, and Figure 7 is an example of an easy writing center task card.

The intermediate level activities for children with beginning reading and writing skills can include:

First Semester

Any of the easy activities previously suggested, such as dot-to-dot, drawing, and coloring, taken a step further:

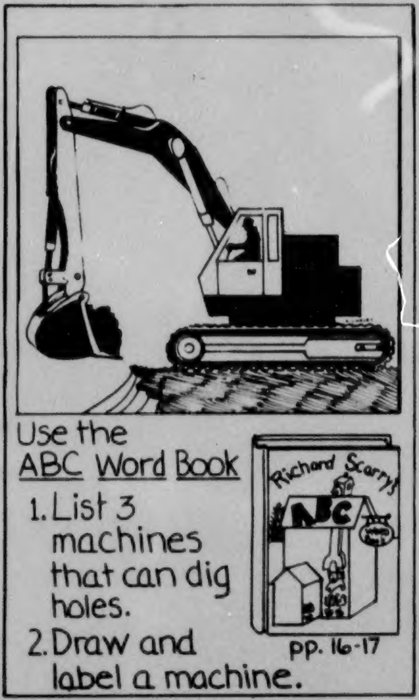
- Drawing, coloring, and labeling
- Copying a few words
- Writing a short sentence
- Choosing the ending of a story
- Filling in the blanks

Second Semester

- Filling in the blanks
- Choosing a story ending
- Writing two or three short sentences
- Answering one or two research questions (answers should be short--two or three words)
- Creating a story from given vocabulary

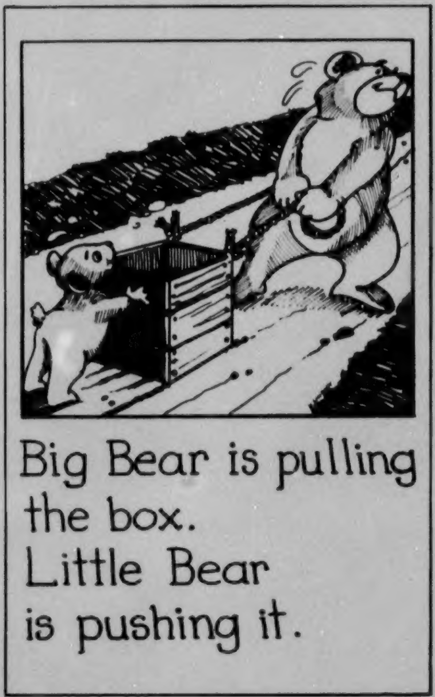
Label pictures and write vocabulary on the cards to help children spell. Figure 8 is an example of an intermediate level research card; Figure 9 is an example of an intermediate level writing card.

Figure 8. Intermediate Research Card.



Use the
ABC Word Book
1. List 3 machines that can dig holes.
2. Draw and label a machine.
pp. 16-17

Figure 9. Intermediate Writing Card.



Big Bear is pulling
the box.
Little Bear
is pushing it.

The most difficult level for children who are reading and writing with ease includes:

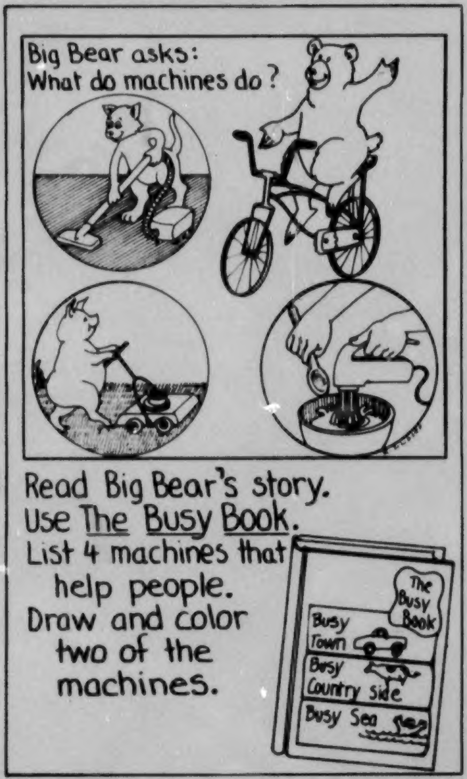
First Semester	Second Semester
Copying sentences	Using "lead-ins" or "story starters" for children to create their own story
Choosing story endings	Answering three or four research questions
Answering one or two research questions	Writing a short creative story from their own ideas
Writing a short story from vocabulary listed on a card	

Figure 10 is an example of a difficult research card, and Figure 11 is an example of a difficult writing card.

When making research cards be sure to:

- Number the questions
- Make the answer to the question obvious to the child
- Put a marker or rubber band in the reference book if necessary
- Use "mini-pictures" of the reference book on the research card
- Include title of the reference book and, when appropriate, include volume number and page number
- Use a few words consistently. Teach the words to the children. Commonly used

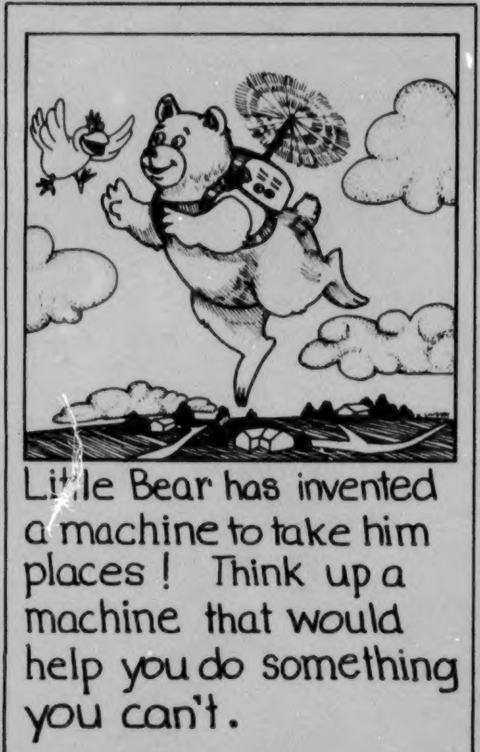
Figure 10. Difficult Research Card.



Big Bear asks:
What do machines do?

Read Big Bear's story.
Use The Busy Book.
List 4 machines that help people.
Draw and color two of the machines.

Figure 11. Difficult Writing Card.



Little Bear has invented a machine to take him places! Think up a machine that would help you do something you can't.

instructions include 1) look up; 2) find; 3) list; 4) trace; 5) draw and color; 6) draw, color, and label; and 7) choose.

- Use colorful, intriguing illustrations on each card to attract the children's interest. Magazines such as Sesame Street and Ranger Rick are especially useful.

Checklist for Evaluating a Good Learning Environment for Young Children

The following checklist is primarily from Open Learning in Early Childhood Education by Barbara Day.

Teacher-Child Relationships

		Yes	No
1.	Do you serve as a guide, facilitator of learning, resource person rather than a dispenser of information?	____	____
2.	Do you have respect for and trust children?	____	____
3.	Do you offer suggestions in a positive, sincere manner?	____	____
4.	Do you circulate among the children -- encouraging them, asking them individual questions, and giving each child individual attention every day?	____	____
5.	Do the children understand their responsibilities and are they encouraged to be independent?	____	____
6.	Do you believe that children respond to genuine experience of trust with positive, productive, and enjoyable behavior, and that they respond to lack of trust and confidence with destructive, hostile, and immature behavior?	____	____
7.	Do you make sure that each child succeeds in something every day?	____	____
8.	Do you operate in a manner that suggests that joy in learning, respect for others, and learning how to learn are more important than acquisition of specific subject information?	____	____
9.	Are the children secure in what they know and not frightened by what they do not know?	____	____
10.	Do you really listen to questions raised by children, and do you answer them or seek to help individual children find the answer on the appropriate level?	____	____
11.	Do you ask children questions that encourage them to develop logical thinking patterns?	____	____

Program

		Yes	No
1.	Is the program organized to allow for individual differences in pace, style, and range of learning?	____	____
2.	Are many opportunities provided for learning through the senses -- feeling, hearing, tasting, smelling, seeing?	____	____

		Yes	No
3.	Are children free to select many of their own learning activities by using learning centers that are available to them?	____	____
4.	Are the children encouraged to talk to each other, ask questions, and seek their own answers?	____	____
5.	Are there a variety of exciting firsthand experiences available for the children where they can make choices and produce on their own?	____	____
6.	Is an integrated day in operation, during which there are no class lessons based on prescribed time allotments, but rather a great variety of experiences are available in the creative, intellectual, artistic, and physical areas?	____	____
7.	Are children learning from each other -- by observing, imitating, and teaching one another?	____	____
8.	Are the children planning and evaluating their activities?	____	____
9.	Are children given freedom to learn by exploring, discovering, inquiring, and experimenting rather than by being given facts or direct answers to their questions?	____	____
10.	Are individual and small group activities encouraged, rather than total group instruction?	____	____

Materials and Equipment

1.	Is there a wide variety of materials, supplies, and equipment for children to work with which accommodates different ages, abilities, and interests?	____	____
2.	Are children encouraged to interact with or act upon their environment using many open-ended and self-corrective materials?	____	____
3.	Are children encouraged to supply some of their own materials so that their interests are appreciated and fully incorporated into the program?	____	____
4.	Are materials available that ensure development of both fine and gross motor skills?	____	____
5.	Are materials organized, and do they have a definite place so that children know right where to find them and also can put them away in the appropriate place immediately after use?	____	____
6.	Are the children free to use the equipment by themselves, and do they know how to properly care for it?	____	____
7.	Are informal, teacher-made and child-made materials encouraged and utilized, as well as commercially made materials?	____	____
8.	Are materials and equipment safe and durable, and are they used outdoors throughout the day just as appropriately as indoors?	____	____

	Yes	No
9. Are there many materials that are concrete and sensory and can be counted, arranged, and rearranged? Are there things that can be taken apart and put together again?		

Physical Environment

1. Are the classrooms decentralized or divided into a variety of learning centers, rather than having straight rows of desks or tables and chairs?		
2. Is the furniture arranged so that a number of large work surfaces are available?		
3. Is the classroom a beautiful place with a warm, inviting, homelike atmosphere?		
4. Are there a variety of learning centers, such as language arts, math and science, art and music, housekeeping, woodworking, sand and water, listening and viewing, a creative corner, and a quiet area with a piece of colorful carpet and/or some pillows?		
5. Is there adequate space for active children to explore, create, and move around freely?		
6. Are there storage areas with an adequate place for each child to put wraps, completed work and projects, and other possessions?		
7. Are the toilet and water facilities adequate and convenient for children?		
8. Are the rooms well heated, lighted, and ventilated?		
9. Is there provision for an easy flow of activities between outdoors and indoors, and is the outdoors used throughout the day as a part of the total living-learning environment?		
10. Is the outdoor area adequate for free play, organized games, and quiet play?		
11. Is there a separation of noisy centers like blockbuilding and housekeeping from quiet areas like reading and research?		
12. Are bulletin boards and displays in the room organized around children's handiwork?		

Outdoor Learning Environment

1. Is the outdoors used in conjunction with the indoors as an extension of the classroom?		
2. Are the children free to move outside as a part of an integrated day, and are the experiences enriching rather than restricting?		
3. Is there an entrance into the school from the outside so that games, materials, and equipment can be moved in and out easily?		

		Yes	No
4.	Are open-ended materials available for children to use in their own creative ways (for instance, boxes, barrels, rubber tubes, wood strips, and kegs with rubber tops for drums)?	____	____
5.	Is there a hard surface area that would be appropriate for playing with blocks and vehicles, bouncing balls, and other activities?	____	____
6.	Is there a balance of sunny and shaded areas so that the children might choose either?	____	____
7.	Is there a grassy area that would provide a soft space for sitting together for a story, playing, or running?	____	____
8.	Is the outdoor environment safe -- free from glass and sharp metal?	____	____
9.	Is there a mixture of homemade, inexpensive equipment (ropes, tires, telephone spools, sewer pipes, beanbags, newspaper ball) and commercial equipment (jungle gyms, wheeled toys, slides, and other stationary play equipment, climbing and reaching apparatus, rockers, and so forth)?	____	____
10.	Is there a sandbox with buckets, shovels, various containers, water, blocks, and measuring containers of different sizes and shapes to test math concepts and encourage imaginative and dramatic play?	____	____
11.	Is there an adequate woodworking table with appropriate tools (hammer, saws, nails, screwdrivers, plane, chisel, jigsaw, vise, drill, clamp, file, sandpaper, measuring sticks), a variety of sizes and shapes of wood pieces, and a sawhorse?	____	____
12.	Is there an area for water play with a variety of materials (boats, sponges, corks, funnels, rubber hoses, plastic containers for measuring, eggbeaters, liquid detergent, objects that sink and float) so that the children can explore, analyze, and discover some simple math and science concepts?	____	____
13.	Are easels available for outdoor painting, and is there a roller table (or cart) for paints, brushes, and other art supplies that can be readily wheeled to the outdoor area for art?	____	____
14.	Is there an adequate area for block building outside (preferably a cement area), and is there a roller cart or bin for rolling blocks from the block center to the outside area?	____	____
15.	Is there evidence of growing things (vegetable gardens, flower gardens, potted plants) that have been planted and cared for by the children?	____	____
16.	Are there outdoor animals in cages or pens that are kept as pets or for observation?	____	____

		Yes	No
17.	Do the equipment and materials provided encourage children to do something based on their own ideas rather than to just watch something operate?	____	____
18.	Are the equipment and space adequate for the development of motor skills and muscular coordination?	____	____
19.	Is the outdoor area accessible so as to facilitate supervision and minimize the possibility of accidents (preferably large windows from floor to ceiling)?	____	____
20.	Are adequate equipment and space provided for dramatic play (tree house, fort, Indian teepee, raised platforms, stripped-down car, rows of wooden crates, logs, trees, stumps, outdoor theater, little houses, or "in and out" places where the children can crawl through and climb in and out)?	____	____
21.	Is there an outside storage area, and is the equipment organized and stored so that children know where it is and where to put it away?	____	____
22.	Is there an outside covered area or roof so that activity can go on even on drizzly days?	____	____
23.	Are the children given the opportunity to work and play outside alone and in small groups and both quietly and actively?	____	____
24.	Is there a natural environment with trees, plants, and flowers so that children can explore, discover, analyze, and learn about the science of plants and animals?	____	____
25.	Is there climbing equipment and apparatus to help develop large body muscles in the arms and legs?	____	____
26.	Are there balancing beams, logs, posts, or tree stumps so that the children can develop a sense of bodily balance?	____	____
27.	Is there sufficient and, if possible, sliding apparatus to help develop a sense of motor direction?	____	____
28.	Are there interesting and challenging swings that can help develop arm and leg muscles, such as a knotted rope swing or a tire swing?	____	____
29.	Is there a slide or smooth pole that the children can climb up and slide down?	____	____
30.	Is there a diversity of equipment to provide for a variety of developmental levels among the children?	____	____

CURRICULUM ORGANIZATION COMPONENT #2: SKILLS GROUPS

Children's work in learning centers is coordinated with daily skills group instruction in the areas of reading and math.

Objectives

- Describe an organizational pattern for teaching reading and math skills through small group instruction
- List the steps involved in using the British Infant Schools' language experience model for teaching reading
- List activities that incorporate reading into the total classroom environment.

The Organization of Skills Groups

Both standardized readiness tests and teacher-designed checklists are used to diagnose the children's strengths and weaknesses in reading and math. Children are grouped for instruction based on their skill development and learning styles. Groupings are flexible, and children may move from one skills group to another as their needs change. Each teacher works with three reading groups and two math groups every day. Thus there are six possible reading group placements and four possible math group placements for each child in the program.

Each skills group has its own curriculum designed to meet the needs of the children in that specific group. Typically, the first ten to fifteen minutes of each reading group are used to teach new concepts in phonics, handwriting, language, vocabulary, and so forth. Next, written tasks related to these concepts are assigned and explained. Then the children work with the teacher on their reading materials. A variety of materials is used. One group may be using a language experience approach, while another uses basal readers. An individualized reading kit can be used with a mature, independent group of children.

Math skills groups are also organized in the same manner. First, new concepts are introduced, often with the use of games and manipulatives. Then written work is explained and assigned. Different groups use different math texts, depending on their level of expertise and their learning styles.

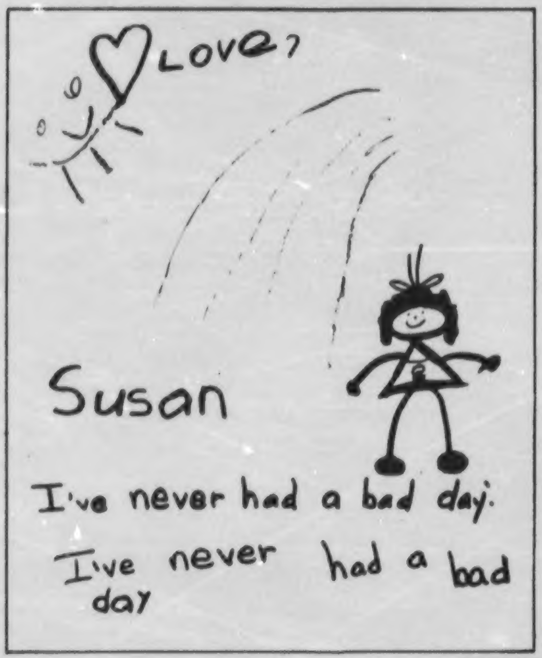
An interesting approach to teaching reading through the use of language experience is used in some British Infant Schools. The basic steps in this approach are as follows:

Step 1. The first step in the language experience approach initially involves having the child draw a picture illustrating an experience in which she has been involved. The child is then encouraged by the teacher to relate a few words about the picture. The teacher writes this sentence on the child's paper. The teacher also writes the exact caption on another strip of paper, and the child cuts this up into individual words. The child learns these words (perhaps by playing games with them) and then pastes them underneath the matching words in the sentence on her paper (see Figure 12).

Step 2. The second step in the language experience approach partially follows the same procedure as the first step. The child draws a picture illustrating an experience and then relates something about her picture, which the teacher records. The child is then encouraged to rewrite the caption underneath the teacher's writing (see Figure 13).

Step 3. The third step in the language experience approach can be taken when the child has begun to write and to read some on her own. Again the child draws a picture illustrating an experience, but this time she writes her own caption underneath the picture (see Figure 14).

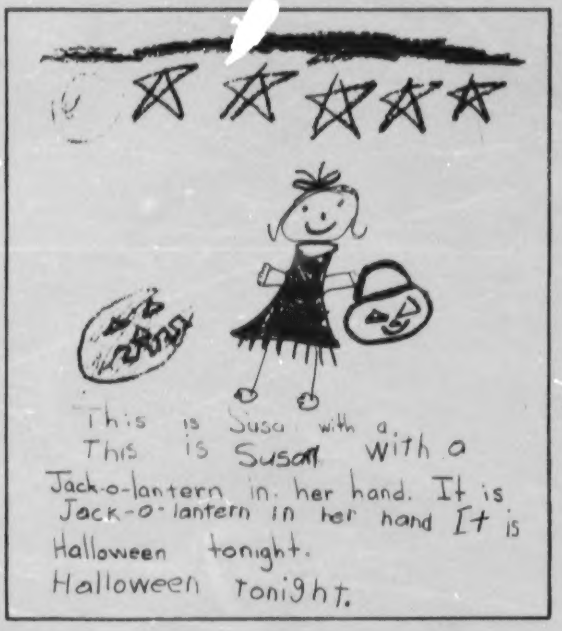
Figure 12. Language Experience Illustration, Step 1.



I've never had a bad day.

I've never had a bad day

Figure 13. Language Experience Illustration, Step 2.



This is Susa with a

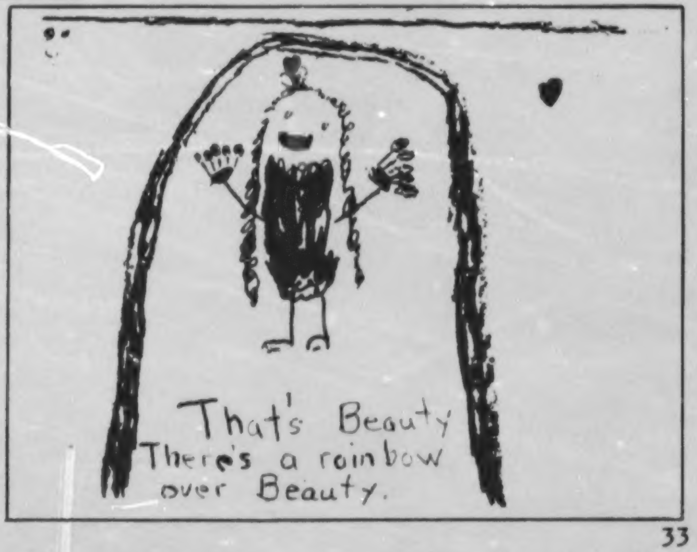
This is Susan with a

Jack-o-lantern in her hand. It is

Jack-o-lantern in her hand It is

Halloween tonight.

Halloween tonight.



That's Beauty

There's a rainbow over Beauty.

Figure 14. Language Experience Illustration, Step 3.

Activities for a Developmental Reading Program (Day, 1973)

The following are some recommended activities for those who might be interested in moving toward a developmental reading program:

1. Encourage children to write and illustrate their own books. Older children can help younger ones. Add these books to the reading center, to a special area in the library, or to the instructional materials center labeled "Local Authors."
2. Set up a reading center that is inviting and challenging -- cardboard dividers, expanding book display shelves, or wooden bookshelves may serve to divide the area from other parts of the classroom and allow for a little more privacy. A rug on the floor, stuffed animals, cushions or pillows, perhaps a small day bed, and a rocking chair will add to the appeal of this area. A table with a lamp on it will add warmth as well as good lighting. Live plants on the bookcases or on the floor are also suggested for this area. Books on a variety of subjects and reading levels should be attractively displayed with front covers facing outward if possible. In addition to books, there should be a variety of materials that children enjoy reading, such as magazines, newspapers, pamphlets, and learning task cards. To further enrich this area, books with corresponding records and tapes, films, filmstrips, or film loops designed to complement selected books should be added. These supplementary materials should be changed often to promote interest and curiosity.
3. Display the children's stories, poems, or other written experiences on the classroom bulletin boards, in the hallways, in the school library, in the cafeteria, or other areas of the school.
4. Make exciting and challenging reading and word games for children to play. Encourage children to use these as well as to make their own games, using new and familiar words.
5. Encourage children to read and browse just for fun. Let the children know that you, the teacher, enjoy reading by reading to them and by taking them to the public library where you, as well as the children, check out books. Be interested in all kinds of books -- picture books, dictionaries, encyclopedias, fine arts books, hobby books, books of poetry, and so forth.
6. Ask parents to assist you in the reading program by listening to children read. Encourage parents to come to your classroom so that some are there each week. Make sure that the parents feel good about their contribution and that they learn to share this excitement with children.
7. Keep accurate records of each child's reading progress, including books read, dates completed, word recognition skills obtained (picture clues, sight words, context clues, phonics, structural analysis, and dictionary usage), and the child's level of meaning (literal comprehension, interpretation, and critical reading). Individual conferences between the child and the teacher are extremely important. Depending on his or her own level of reading development, the child is then guided toward further progress in skills, attitude, comprehension, and enjoyment. Conversations with parents regarding the child's reading progress are essential.
8. Create an atmosphere of reading all around the classroom; for example, label the individual work created in the woodworking, block building, or art center; provide a variety of interesting little books that can be read in a single sitting; place a book titled Things That Sink or Float near the water table; include books about unit topics in the science and social studies centers.
9. Select poetry and stories full of quality and depth, and make them a part of the child's learning experience every single day.

10. Follow the real interests of the children, not what you think their interests should be.

CURRICULUM ORGANIZATION COMPONENT #3: THE UNIT OF STUDY

Social studies and science are taught using the unit of study approach. Units are taught in home base groups and through activities and experiments set up in the social studies and science learning centers. The unit themes and concepts are also integrated into other classroom learning centers such as art, research, writing, and so forth. A hands-on, experiential approach for the children is emphasized.

Filmstrip 3, "The Unit of Study," details both the planning and implementation of this approach. Learner objectives and activities are included in the section of the manual that accompanies Filmstrip 3.

CLASSROOM MANAGEMENT COMPONENT #1: COLOR CODING

The systematic use of color in an early childhood classroom is a technique designed to help young children function independently in a complex environment. Children can quickly learn a color-coding system that enables them to locate specific learning centers, books, games, task cards, and so forth, even if they do not yet possess reading skills. Color coding provides an efficient, effective method for keeping children on task.

Objectives

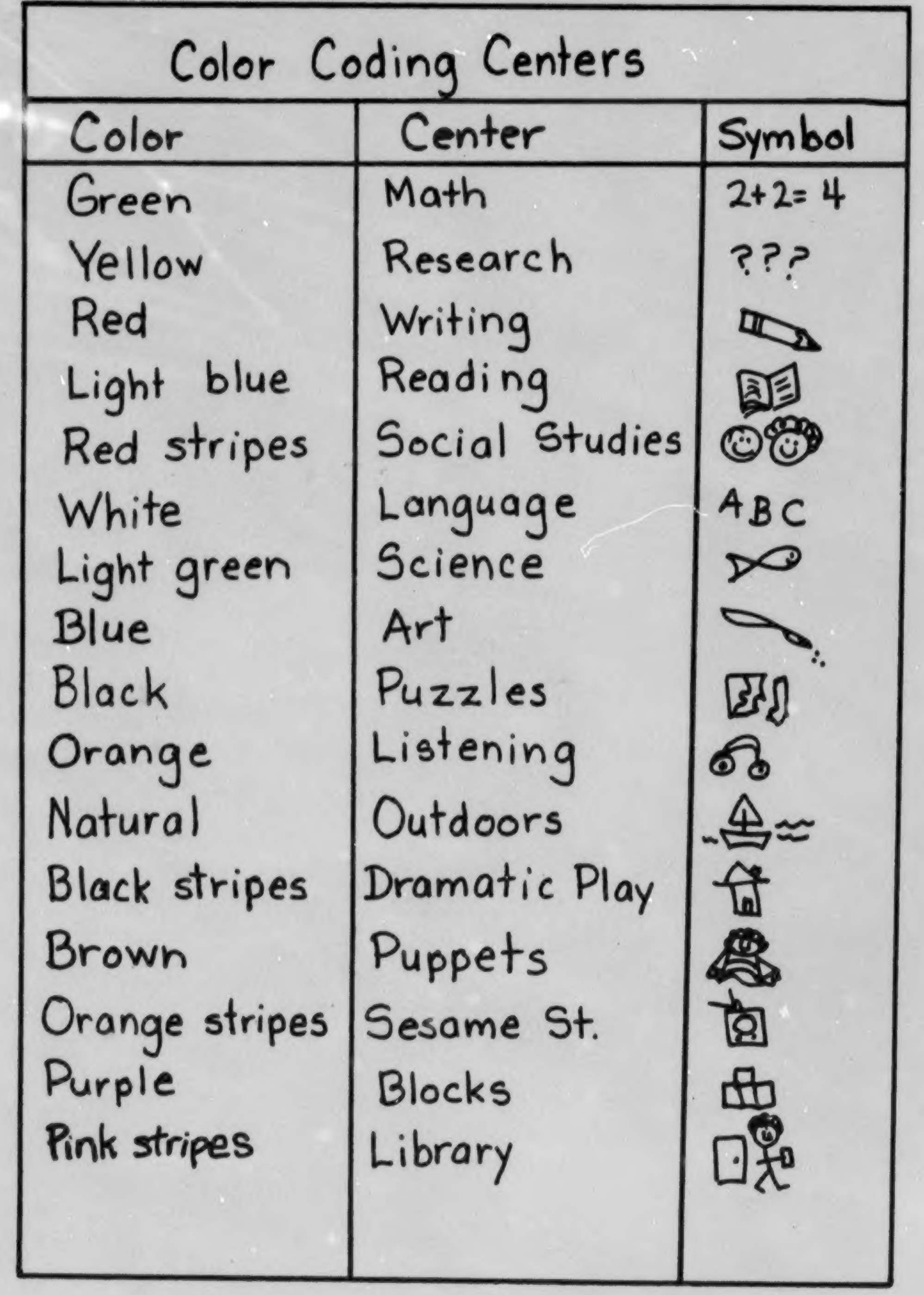
- Describe how color coding helps children identify each learning center in the classroom
- Describe how the use of color-coded center charts and clothespins manages the children's movement patterns into and out of the classroom learning centers
- Describe how the color coding of games, activities, books, and so forth allows young children to find assigned materials and to clean up independently.

Color Coding Learning Centers

Learning centers can be set up using a system that incorporates both color coding and the use of symbols. The symbols help the children identify the concepts taught in each center. The color code for each center helps the children locate that area of the classroom with ease (see Figure 15).

A chart showing the center's color and symbol is hung at the entrance to each center. The number of children allowed in each center is indicated in the upper right hand corner of each chart. The corresponding number of clothespins is attached to the bottom of each chart. Clothespins are spray painted or colored with magic markers to match the color of the center chart. For example, the art center chart is dark blue,

Figure 15. Color Coding Centers.



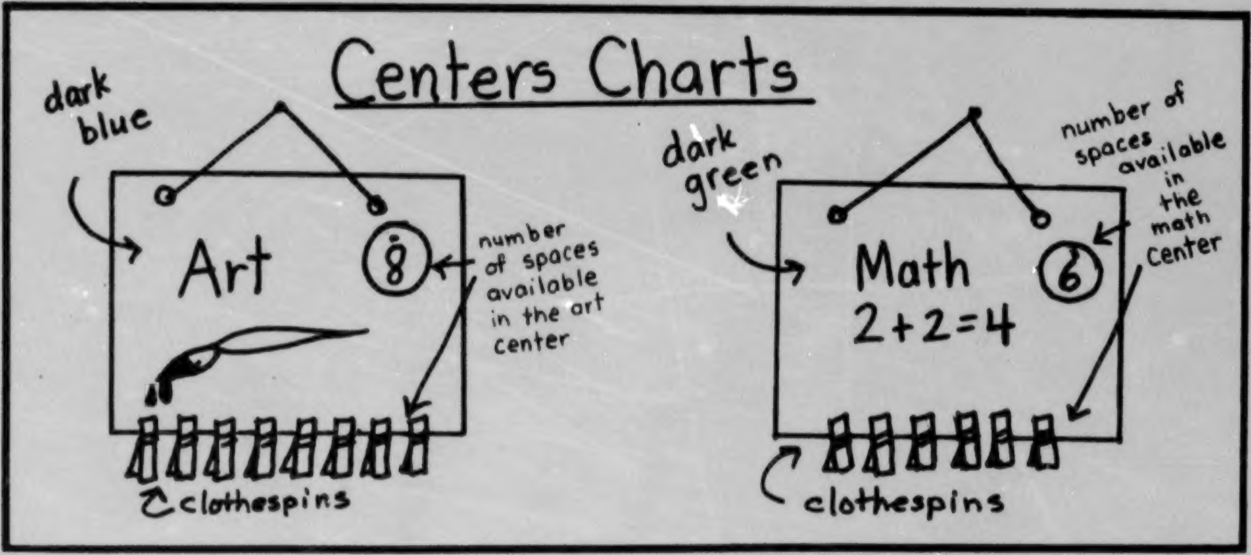
Color Coding Centers

Color	Center	Symbol
Green	Math	2+2= 4
Yellow	Research	???
Red	Writing	
Light blue	Reading	
Red stripes	Social Studies	
White	Language	ABC
Light green	Science	
Blue	Art	
Black	Puzzles	
Orange	Listening	
Natural	Outdoors	
Black stripes	Dramatic Play	
Brown	Puppets	
Orange stripes	Sesame St.	
Purple	Blocks	
Pink stripes	Library	

and the math center chart is dark green (see Figure 16).

The color-coded clothespins serve as tickets for entering the center. A total of eight children may use the art center at any one time; therefore, eight clothespins are attached to the art center chart.

Figure 16. Centers Charts.


Centers Charts
dark blue
Art
8
number of spaces available in the art center
clothespins
dark green
Math
2+2=4
6
number of spaces available in the math center
clothespins

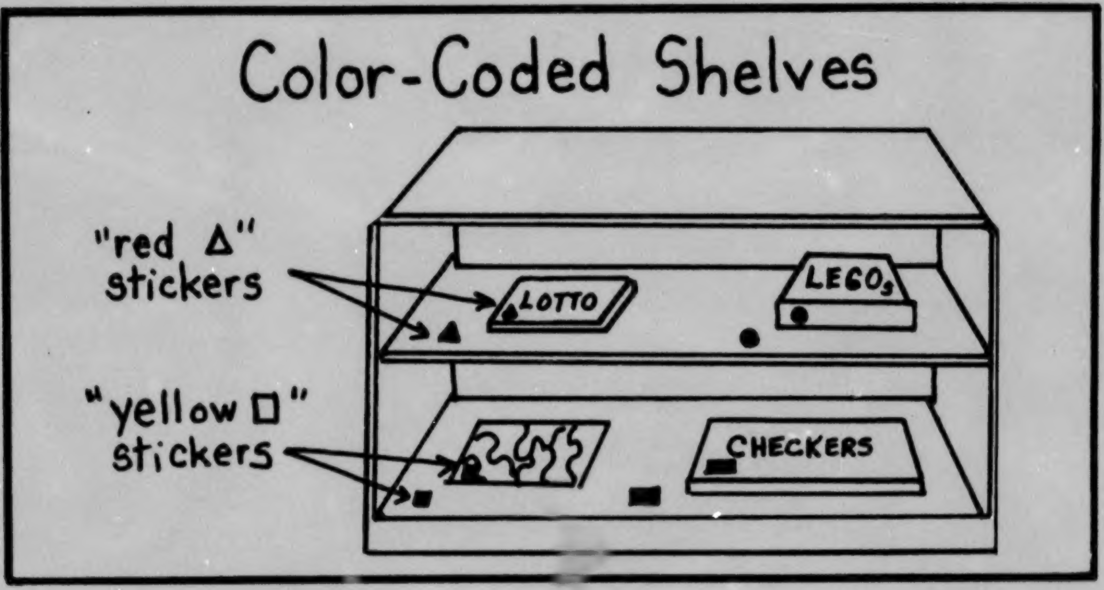
To enter the art center, a child must take a dark blue clothespin from the art chart and clip it onto his or her clothing. If there are no clothespins left on the art chart, then no more children may enter the art center. A child who wishes to do an art project can easily glance at the chart and see whether or not any clothespins are available. If there are none, he or she needs to come back later when a clothespin has been returned to the chart by another child who has left the center. This technique manages the number of children in the art center so that no more than eight are in the center at any one time.

The color-coded charts and clothespins also provide visual cues that help children locate the different learning centers in the classroom. Young children can often locate the orange clothespins before they can understand directions that ask them to find the listening center.

Color Coding Games and Activities

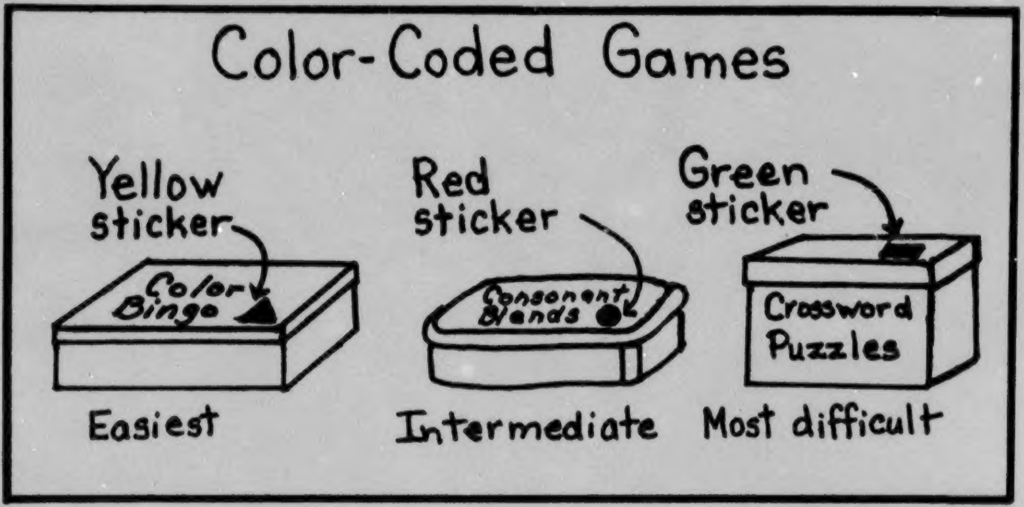
Color coding also helps organize the games and activities in the learning centers. Stickers of different shapes (for instance, ○ △ □ ☆) and different colors may be cut from contact paper.

Figure 17. Color-Coded Shelves.


Color-Coded Shelves
"red ▲" stickers
LOTTO
LEGOs
"yellow ☐" stickers
CHECKERS

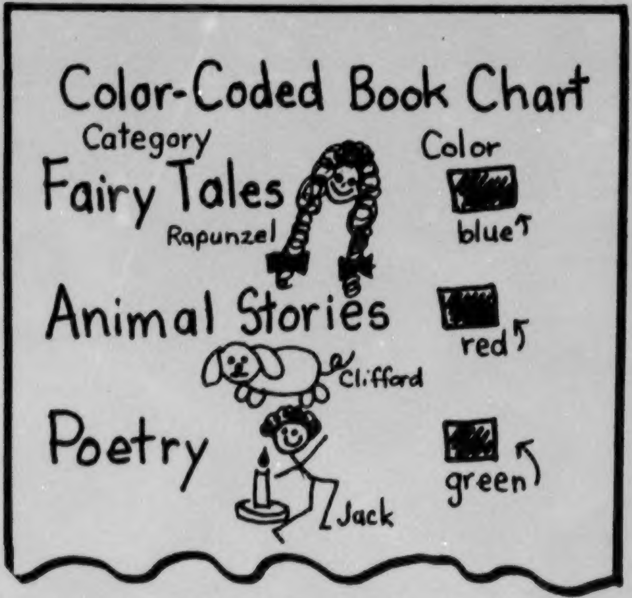
These stickers are attached to each game or activity and to the shelf where it belongs (see Figure 17). This system enables young children to find an assigned game independently and to replace the materials easily and correctly. For example, a child may have been assigned the red ▲ game in the puzzle center. She can find her activity by glancing at the stickers on the games. After she plays the game, it is easy for her to put it back in its designated spot on the shelf by matching the sticker shape and color.

Figure 18. Color-Coded Games.


Color-Coded Games
Yellow sticker
Color Bingo
Easiest
Red sticker
Consonant Blends
Intermediate
Green sticker
Crossword Puzzles
Most difficult

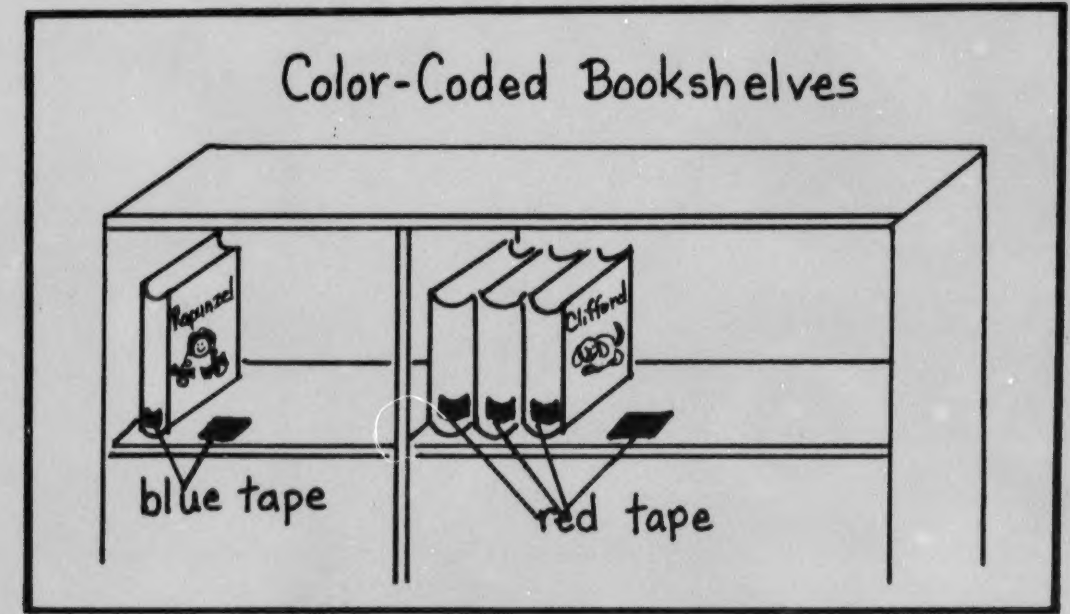
Color coding of games and activities can also be used to indicate materials of different degrees of difficulty for children with different levels of expertise (see Figure 18). Any three basic colors can be selected to represent the levels of difficulty. For example, the easiest games and activities can all be labeled with yellow stickers, intermediate games and activities with red stickers, and the most difficult materials with green stickers. Depending on the child's abilities, he or she may be asked to choose a yellow sticker game, a red sticker game, or a green sticker game. This use of color enables the teacher to assign children appropriate activities on an individualized basis.

Figure 19. Color-Coded Book Chart.


Color-Coded Book Chart
Category
Color
Fairy Tales
Rapunzel
blue
Animal Stories
red
Clifford
Poetry
green
Jack

Classroom libraries can be organized by color-coding systems. Books can be categorized and each category assigned a color; for example, fairy tales can be coded in blue, animal stories coded in red, and poetry coded in green (see Figure 19). A small piece of tape is applied to the binding of each book and to the section of shelf where the book belongs (see Figure 20). Children can use a chart to find books in which they are interested. The color-coding system then helps them reshelve the books correctly.

Figure 20. Color-Coded Book Shelves.


Color-Coded Bookshelves
Rapunzel
Clifford
blue tape
red tape

CLASSROOM MANAGEMENT COMPONENT #2: CONTRACTS

Contracts are used as a mechanism for structuring each child's day in a complex learning environment. Contracts also provide early childhood teachers with a means of structuring complex learning environments. Contracts promote on-task behavior, organize traffic flow in the classroom, monitor the number of times a child visits a center during the week, monitor the variety of centers that a child uses, and provide a tool for daily evaluation of each child. Contracts offer parents a record of the child's activities for each day -- a good public relations device.

Contracts give children 1) a mechanism for handling their own transitions from one center to another; 2) the opportunity to work at their own pace during the day, since it is not necessary either to hurry up or wait for an entire group to finish one project before starting another; 3) the chance to pursue some of their own interests; and 4) a mechanism for each child to be accountable to himself or herself for the day's work.

The contract reflects the child's daily schedule and is consistent with his or her developmental level. In this classroom, the children's day includes spending approximately one-third of the time with the teacher, one-third on independent activities planned by the teacher, and one-third on their own free choices. The learning activities on the contracts are usually a combination of follow-up activities based on skills being taught, the introduction of new concepts, and the children's own special interests. A Monday-Friday sequence of contracts is planned so that each learning center is visited two or three times a week. Each teacher plans for three different contract groups within her home base group of twenty-six children.

Objectives

- Define contracting for young children
- Develop a rationale for the use of contracts
- Identify contract formats that represent different levels of difficulty
- Identify contract formats that represent different curriculum goals, such as daily contracts, weekly contracts, science contracts, and so forth
- Design contracts that can be used in one's own classroom
- Plan an orientation for young children that introduces them to the use of centers and contracts
- Describe how to use an evaluation system based on the use of contracts.

Steps in Contract Design

Follow these six steps in designing contracts for young children:

Step 1. Decide on the time frame the contract will cover (a part of each day, the entire day, several days, or a week). Older children may use contracts that cover a period of several days.

Step 2. Decide what activities you wish to include on the contract. These may include center assignments (work from a list of the centers you will be using); skills groups; independent assignments such as spelling, writing, language; and free choice activities selected by the children.

Step 3. Make a schedule for the child's day that includes the activities decided upon in Step 2.

Step 4. Decide on the contract format. The reading levels of the children help determine the formats that can be used most effectively. Children who do not have reading and writing skills need contracts that use symbols and color coding. Children with more advanced skills can use a more complex contract with written directions. Use simple symbols that are easy to reproduce by hand. Contracts can be lettered by using a primary typewriter or by hand.

Step 5. Decide on the number of different contract groups necessary to meet the children's needs and to make the most efficient use of the classroom. Three different contract groups are usually a workable number for an individual teacher to manage. Three groups provide for a variety of skill levels within the class, and three different contracts also balance the number of centers in use each day by different groups of children. (For example, a logistical mistake can be made if every child in the classroom is assigned the same contract on the same day. All the children would be trying to use the same five or six centers during the day. Some centers would not be used at all, while traffic jams developed at others.)

Step 6. Graph the weekly use of centers by each group. Plan the contracts so that no one area of the classroom is overcrowded on any one day and no one center remains empty for an entire day.

Constructing a graph for each contract group and the centers they use each day helps prevent over- and underutilization of space. The graph also helps ensure that each group goes to each center during the week a specified number of times. For example, in Figure 21 note that each group is scheduled into the art center twice during the week.

It is important to vary the type of experiences each contract group has each day, including creative, cognitive, and psychomotor experiences. Worksheet 1 in the Appendix can be used by teachers to plan their own weekly schedule for contract groups.

Figure 21. Example of a Weekly Schedule for Contract Groups.

A Weekly Schedule for Contract Groups

Group A has 7 children; Group B, 10; Group C, 9.

Centers	Monday	Tuesday	Wednesday	Thursday	Friday
Art	A	B	C	A and B	C
Writing	B	C	A+B	C	A
Reading	A	B	C	C+B	A
Puppets	B	A+C	C	A	B
Sesame St.	C	B	A	C	A+B
Dramatic Play	A	C	B	B	A+C
Blocks	C	A	B	A	B+C
Research	B	A	C	B+A	C
Listening	B	A	C	C+A	B
Puzzles	A	B	A	C	B+C
Language	B	A + C	B	A	C
Outdoors	C+B	C	A	B	A
Library	A+C	B	A	C	B
Math	C	A +C	B	B	A
Science	A	B	C	A+C	B
Social Studies	C	C	A+B	B	A

Contract Sequence

Children progress through different levels (easy to difficult) of contracting as they mature. The contract sequence starts with those for very young children and/or nonreaders and continues through those designed for children working at the third- and fourth-grade levels.

Children in the same classroom may be using very different contract formats, depending on their developmental levels. All children, even older ones who are ready to start using the more advanced contracts, need to have a careful orientation to the use of centers and contracts.

Orientation to Centers

The initial use of learning centers is preceded by a discussion of a few basic center rules that cover caring for materials, controlling voices, staying on task, cleaning up, and using clothespins as tickets for entering centers.

Introduce children to the learning centers through a teacher-planned rotation. Divide the children into small groups and assign each group to a center. For example:

	Group A	Group B	Group C
1st rotation	puzzles	science	reading
2nd rotation	reading	puzzles	science

The children work for about 20 minutes in their assigned areas while the teacher moves among them. Children do not yet move from center to center on their own. The teacher then signals for a clean up and a return to the large group. Subsequent rotations follow this pattern until all children have been to all the centers. This procedure usually takes several days.

The next step in orienting the children to their environment is the introduction of movement from one center to another. The teacher plans a 30-minute period when he or she will work with the children in the centers. During home base group, each child is assigned to a center. The teacher explains that when they finish their first activity, they may then move to another center of their choice. The children are limited to one move. The teacher helps the children follow the rules of sharing, cleaning up, and replacing clothespins on the center charts. He or she helps them move to their second center and gets them settled with another activity. Helping the children understand procedures is the major objective at this stage of the orientation process. At the end of the 30-minute period, the teacher signals for clean up and a return to home base group.

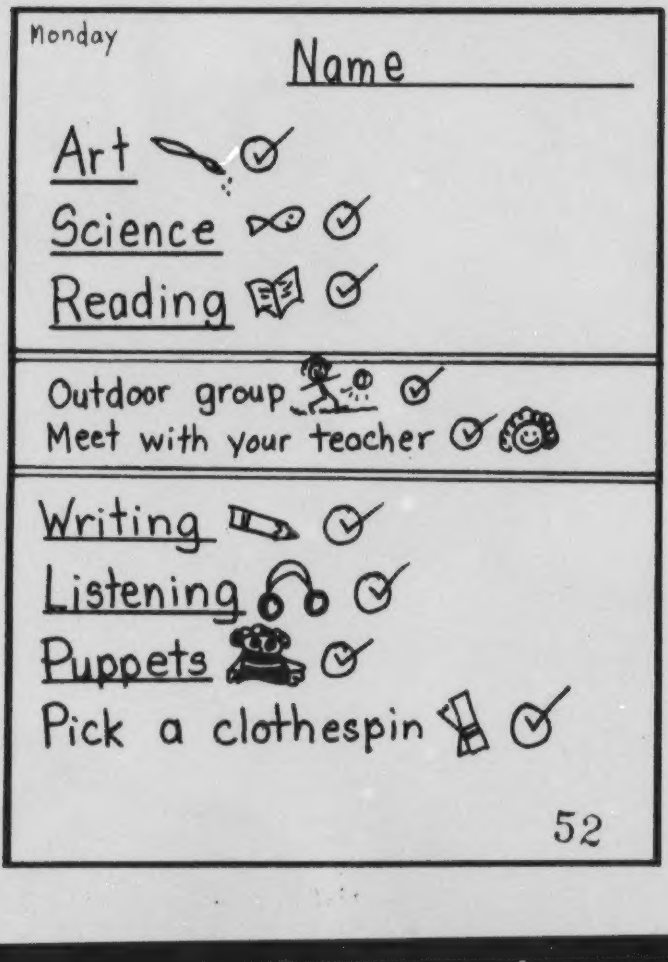
At this point it may be helpful to schedule a 30-minute morning and a 30-minute afternoon center teaching time. This schedule may be useful for several days. The amount of time that children spend in centers can be gradually extended as they become more independent. When children have become familiar with color coding, center symbols, clothespins, the learning center materials, and the arrangement of the classroom, they are ready to begin using contracts.

It is often easier to start the more mature children on contracts first and then start other groups of children as they become ready, rather than attempting to start all children with contracts at one time.

Stage 1 Contracts

Stage 1 contracts are simple picture contracts (see Figure 22). The teacher or the child color codes the contract by using crayon to underline the name of the center with the same color as the center's clothespin chart. For example, the art clothespins and chart are dark blue; whenever art appears on the contract, it is underlined in dark blue. Children have two clues to help them use the contract: 1) they read the center symbol, a paint brush, as "art"; and 2) they match the dark blue underlining on their contract to the dark blue clothespin chart that hangs beside the art center. After completing the art activity, the children check off art on their contract and refer to their contract to move to another center. At the end of the contract the phrase "pick a clothespin" indicates that the child can select a free choice center.

Figure 22. Stage 1 Contract.



Monday

Name

Art ✓

Science ✓

Reading ✓

Outdoor group ✓

Meet with your teacher ✓

Writing ✓

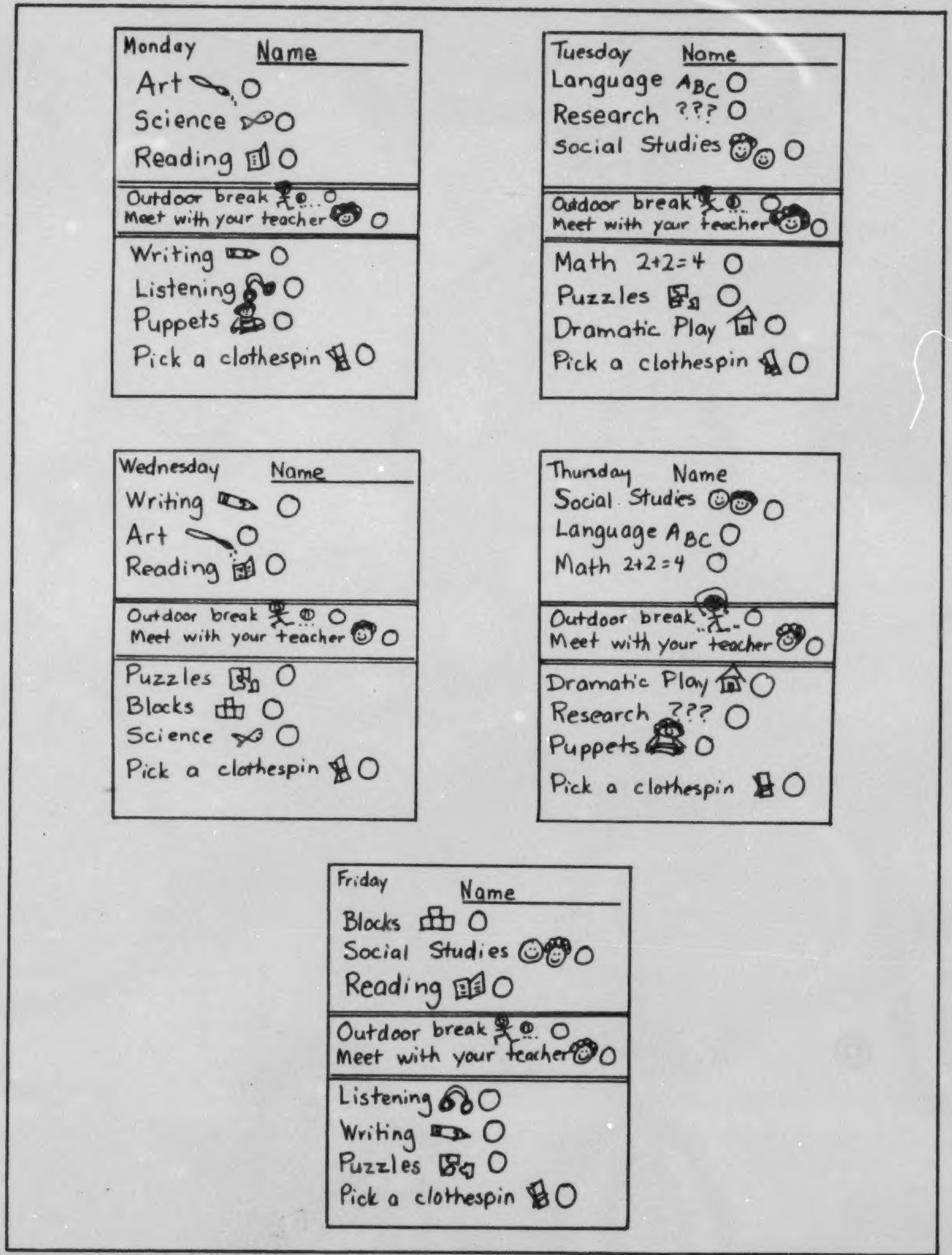
Listening ✓

Puppets ✓

Pick a clothespin ✓

The Monday through Friday sequence of Stage 1 contracts shown in Figure 23 plans a diversity of experiences for each child during the week.

Figure 23. Monday-Friday Sequence of Stage 1 Contracts.



Monday Name
Art ○
Science ○
Reading ○
Outdoor break ○
Meet with your teacher ○
Writing ○
Listening ○
Puppets ○
Pick a clothespin ○

Tuesday Name
Language ABC ○
Research ??? ○
Social Studies ○
Outdoor break ○
Meet with your teacher ○
Math 2+2=4 ○
Puzzles ○
Dramatic Play ○
Pick a clothespin ○

Wednesday Name
Writing ○
Art ○
Reading ○
Outdoor break ○
Meet with your teacher ○
Puzzles ○
Blocks ○
Science ○
Pick a clothespin ○

Thursday Name
Social Studies ○
Language ABC ○
Math 2+2=4 ○
Outdoor break ○
Meet with your teacher ○
Dramatic Play ○
Research ??? ○
Puppets ○
Pick a clothespin ○

Friday Name
Blocks ○
Social Studies ○
Reading ○
Outdoor break ○
Meet with your teacher ○
Listening ○
Writing ○
Puzzles ○
Pick a clothespin ○

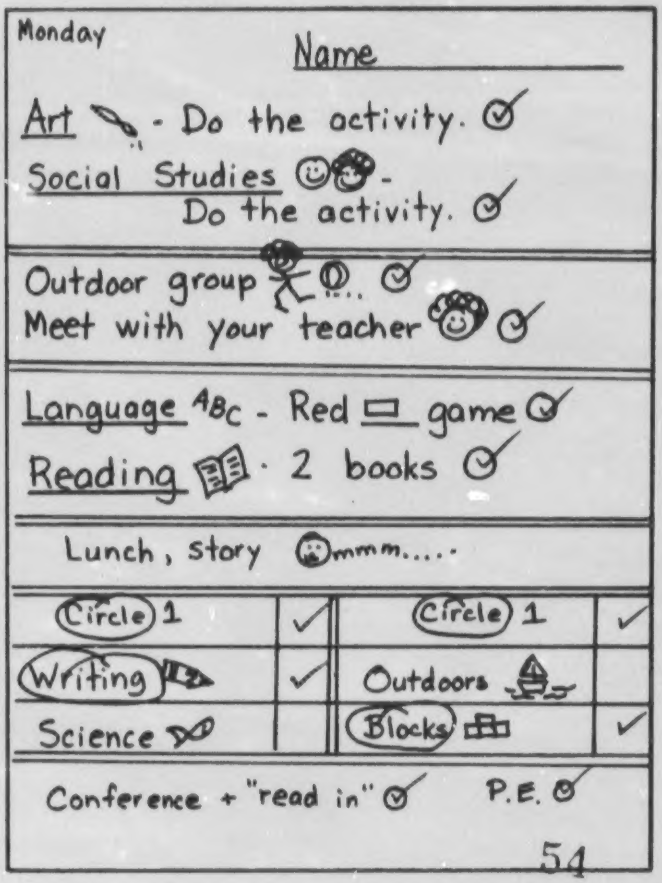
Stage 2 Contracts

Some children will use only clothespins, or use only picture contracts, longer than others. When children can effectively follow a picture contract, they are ready to begin Stage 2. This contract level will add some required center activities as well as a minimal amount of reading. The required activities give the children responsibility for specific tasks. This structure helps children develop independent work habits and also reinforces teacher-designated skills. To follow this contract the child needs to recognize the center symbols, match shapes, and read three color words. These contracts are easily used by children with limited reading and writing skills.

Children using Stage 1 and 2 contracts can begin to work in centers independent of the teacher. Contracts can also begin to cover a longer period of the child's day, as illustrated in Figure 24. The children can copy their assigned tasks from the board, or the teacher can fill in the contract for them. The standardized coding system used on the contracts--"Do the activity," "Play the red △ game"--provides a format that allows the same series of contracts to be used over and over again.

Rather than spending time each afternoon designing contracts with specific tasks such as "Look up Benjamin Franklin" or "Do the magnet experiment" written on them, the teacher has a standard contract form for each day of the week (see Figure 25).

Figure 24. Stage 2 Contract.



Monday
Name ______

Art - Do the activity. ✓
Social Studies -
Do the activity. ✓

Outdoor group ✓
Meet with your teacher ✓

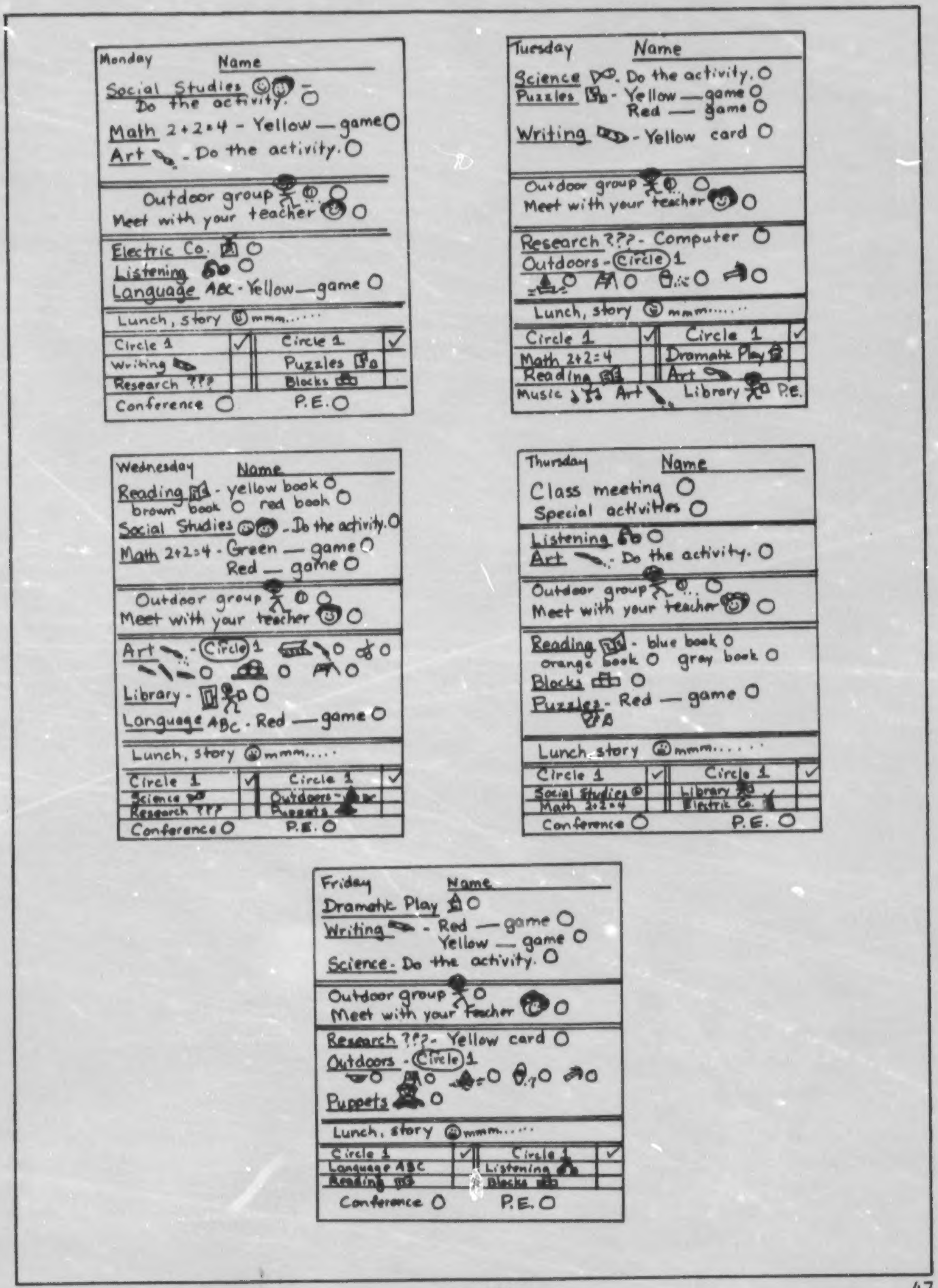
Language ABC - Red ▭ game ✓
Reading · 2 books ✓

Lunch, story mmm.....

Circle 1	✓	Circle 1	✓
Writing	✓	Outdoors	
Science		Blocks	✓

Conference + "read in" ✓ P.E. ✓

Figure 25. Monday-Friday Sequence of Stage 2 Contracts.



Monday Name

Social Studies - Do the activity. ○
Math 2+2=4 - Yellow — game ○
Art - Do the activity. ○

Outdoor group ○
Meet with your teacher ○

Electric Co. ○
Listening ○
Language ABC - Yellow — game ○

Lunch, story mmm......

Circle 1	✓	Circle 1	✓
Writing		Puzzles	
Research ???		Blocks	

Conference ○ P.E. ○

Tuesday Name

Science - Do the activity. ○
Puzzles - Yellow — game ○
Red — game ○
Writing - Yellow card ○

Outdoor group ○
Meet with your teacher ○

Research ??? - Computer ○
Outdoors - Circle 1
○ ○ ○ ○

Lunch, story mmm......

Circle 1	✓	Circle 1	✓
Math 2+2=4		Dramatic Play	
Reading		Art	

Music Art Library P.E.

Wednesday Name

Reading - yellow book ○
brown book ○ red book ○
Social Studies - Do the activity. ○
Math 2+2=4 - Green — game ○
Red — game ○

Outdoor group ○
Meet with your teacher ○

Art - Circle 1 ○ ○
○ ○ ○
Library - ○
Language ABC - Red — game ○

Lunch, story mmm.....

Circle 1	✓	Circle 1	✓
Science		Outdoors -	
Research ???		Puppets	

Conference ○ P.E. ○

Thursday Name

Class meeting ○
Special activities ○

Listening ○
Art - Do the activity. ○

Outdoor group ○
Meet with your teacher ○

Reading - blue book ○
orange book ○ gray book ○
Blocks ○
Puzzles - Red — game ○

Lunch story mmm.....

Circle 1	✓	Circle 1	✓
Social Studies		Library	
Math 2+2=4		Electric Co.	

Conference ○ P.E. ○

Friday Name

Dramatic Play ○
Writing - Red — game ○
Yellow — game ○
Science - Do the activity. ○

Outdoor group ○
Meet with your teacher ○

Research ??? - Yellow card ○
Outdoors - Circle 1
○ ○ ○ ○ ○
Puppets ○

Lunch, story mmm.....

Circle 1	✓	Circle 1	✓
Language ABC		Listening	
Reading		Blocks	

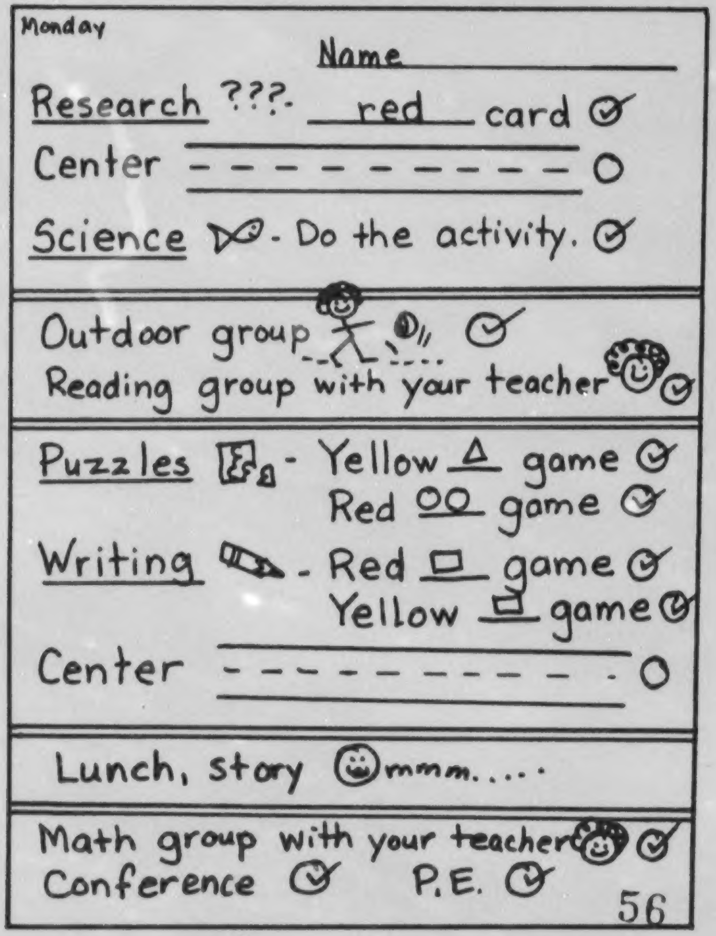
Conference ○ P.E. ○

Time and energy are instead expended on developing such center materials and activities as a task card explaining the magnets experiment or a research card on Benjamin Franklin. These materials can be filed and used over again next year. The standard contract forms are run off in quantity and are always ready for the next day's work.

Stage 3 Contracts

Stage 3 contracts (Figure 26) require more proficient reading and writing skills. Children fill these contracts out for themselves by copying assigned tasks from the chalkboard (Figure 27). Then they select free choices from a chart (Figure 28) that lists the available centers, selecting one free choice center from each side of the centers chart. The chart is designed so that the child must select one center from the more difficult or cognitively oriented centers and one from the psychomotor/creative areas. Figure 29 shows a Monday through Friday sequence of Stage 3 contracts.

Figure 26. Stage 3 Contract.



Monday

Name ____________

Research ???- red card ✓

Center ___________ ○

Science - Do the activity. ✓

Outdoor group ✓

Reading group with your teacher ✓

Puzzles - Yellow △ game ✓

Red ○○ game ✓

Writing - Red □ game ✓

Yellow □ game ✓

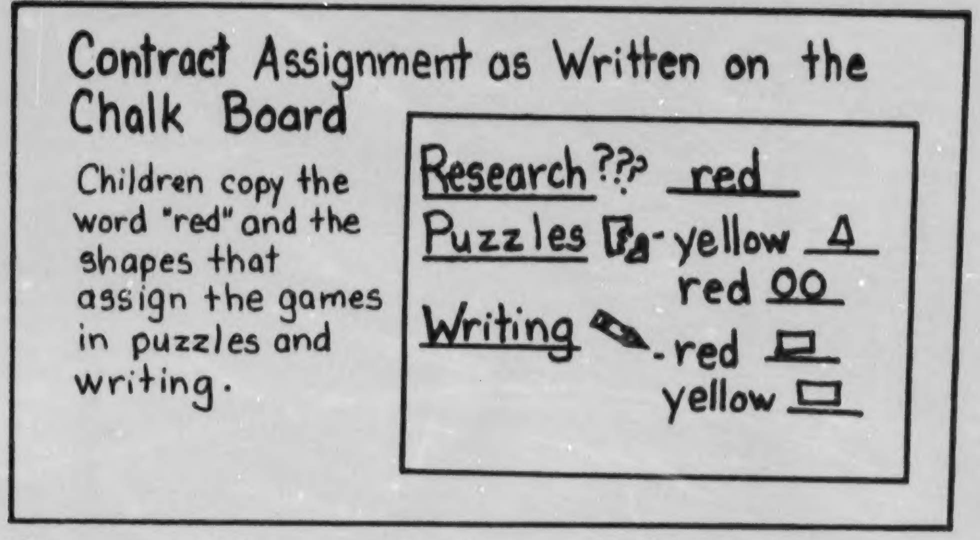
Center ___________ ○

Lunch, story mmm.....

Math group with your teacher ✓

Conference ✓ P.E. ✓

Figure 27. Contract Assignment.

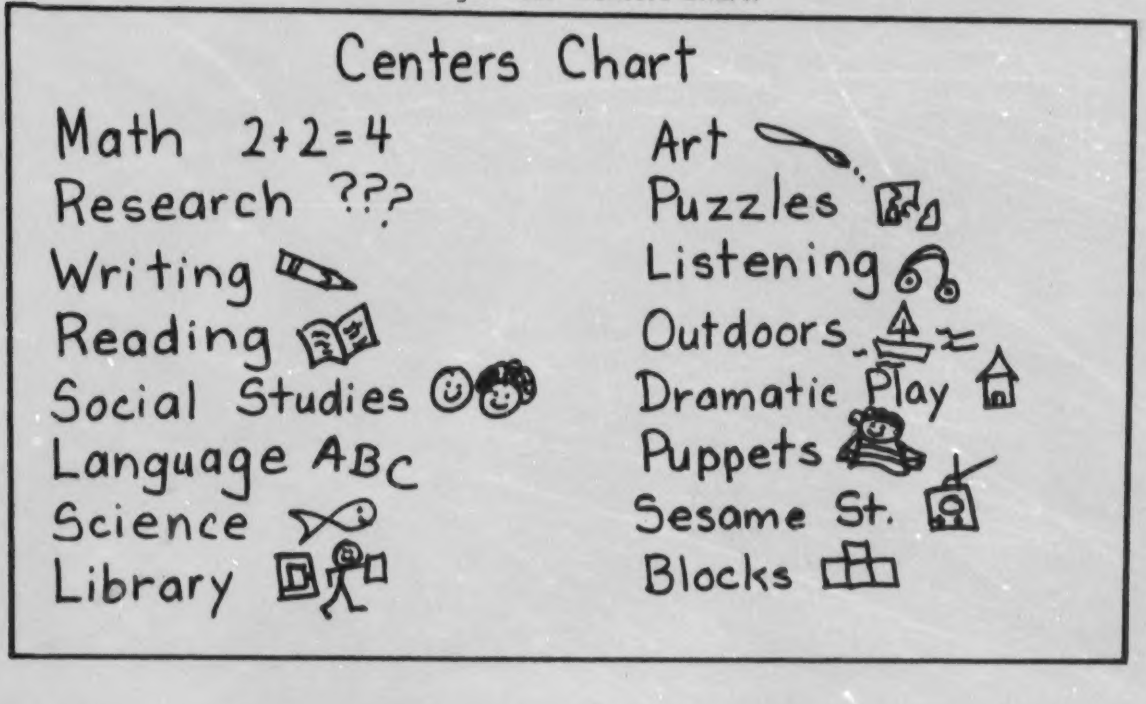


Contract Assignment as Written on the Chalk Board

Children copy the word "red" and the shapes that assign the games in puzzles and writing.

Research??? red
Puzzles - yellow △
red ○○
Writing - red ▭
yellow ▭

Figure 28. Centers Chart.

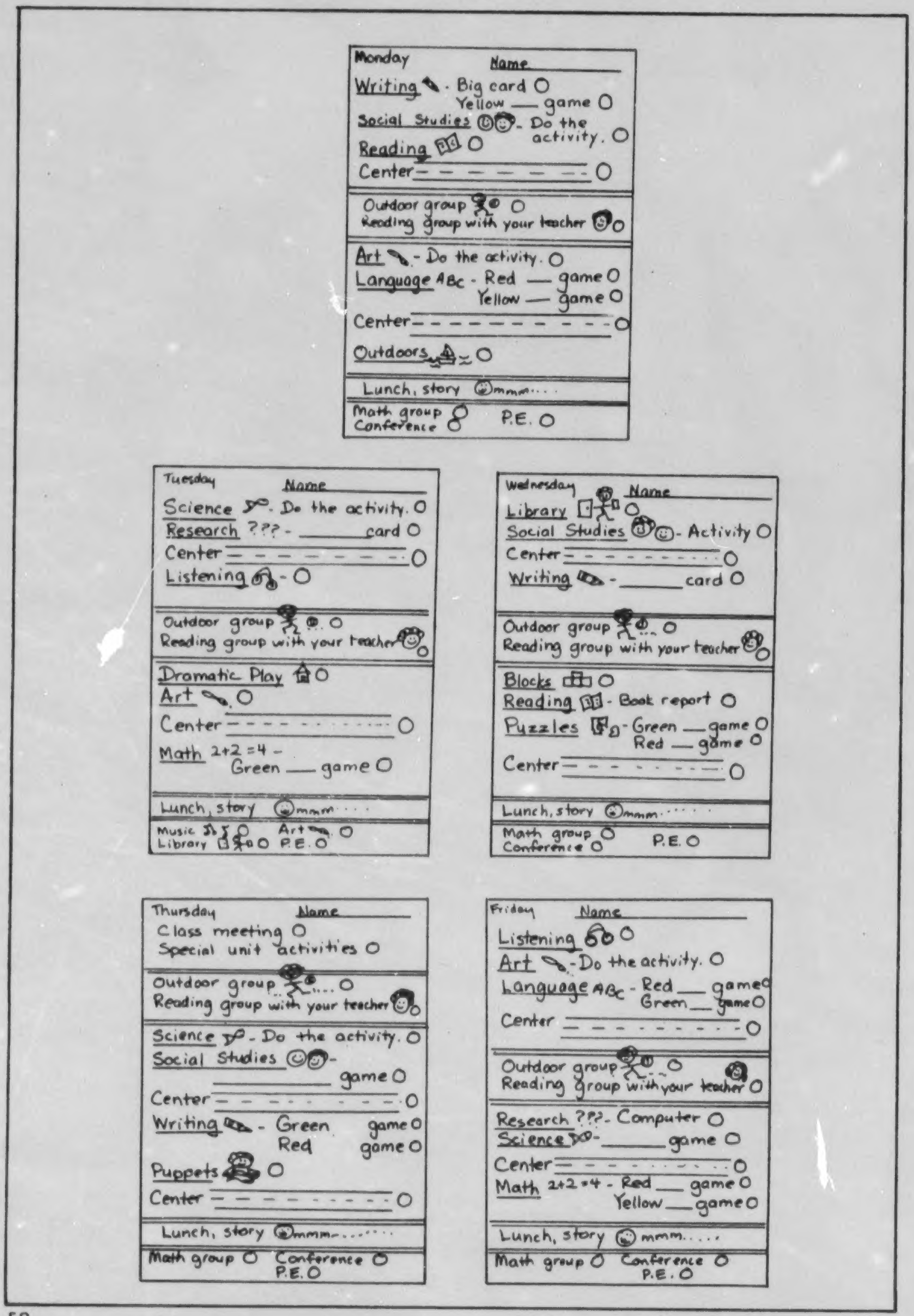


Centers Chart

Math 2+2=4
Research ???
Writing
Reading
Social Studies
Language ABC
Science
Library

Art
Puzzles
Listening
Outdoors
Dramatic Play
Puppets
Sesame St.
Blocks

Figure 29. Monday-Friday Sequence of Stage 3 Contracts.



Monday Name
Writing - Big card ○
Yellow ___ game ○
Social Studies - Do the activity. ○
Reading ○
Center ___ ○

Outdoor group ○
Reading group with your teacher ○

Art - Do the activity. ○
Language ABc - Red ___ game ○
Yellow ___ game ○
Center ___ ○
Outdoors ○

Lunch, story mmm....

Math group ○
Conference ○
P.E. ○

Tuesday Name
Science - Do the activity. ○
Research ??? - ___ card ○
Center ___ ○
Listening - ○

Outdoor group ○
Reading group with your teacher ○

Dramatic Play ○
Art ○
Center ___ ○
Math 2+2=4 - Green ___ game ○

Lunch, story mmm....

Music ○ Art ○
Library ○ P.E. ○

Wednesday Name
Library ○
Social Studies - Activity ○
Center ___ ○
Writing - ___ card ○

Outdoor group ○
Reading group with your teacher ○

Blocks ○
Reading - Book report ○
Puzzles - Green ___ game ○
Red ___ game ○
Center ___ ○

Lunch, story mmm.....

Math group ○ P.E. ○
Conference ○

Thursday Name
Class meeting ○
Special unit activities ○

Outdoor group ○
Reading group with your teacher ○

Science - Do the activity. ○
Social Studies - ___ game ○
Center ___ ○
Writing - Green game ○
Red game ○
Puppets ○
Center ___ ○

Lunch, story mmm......

Math group ○ Conference ○
P.E. ○

Friday Name
Listening ○
Art - Do the activity. ○
Language ABc - Red ___ game ○
Green ___ game ○
Center ___ ○

Outdoor group ○
Reading group with your teacher ○

Research ??? - Computer ○
Science - ___ game ○
Center ___ ○
Math 2+2=4 - Red ___ game ○
Yellow ___ game ○

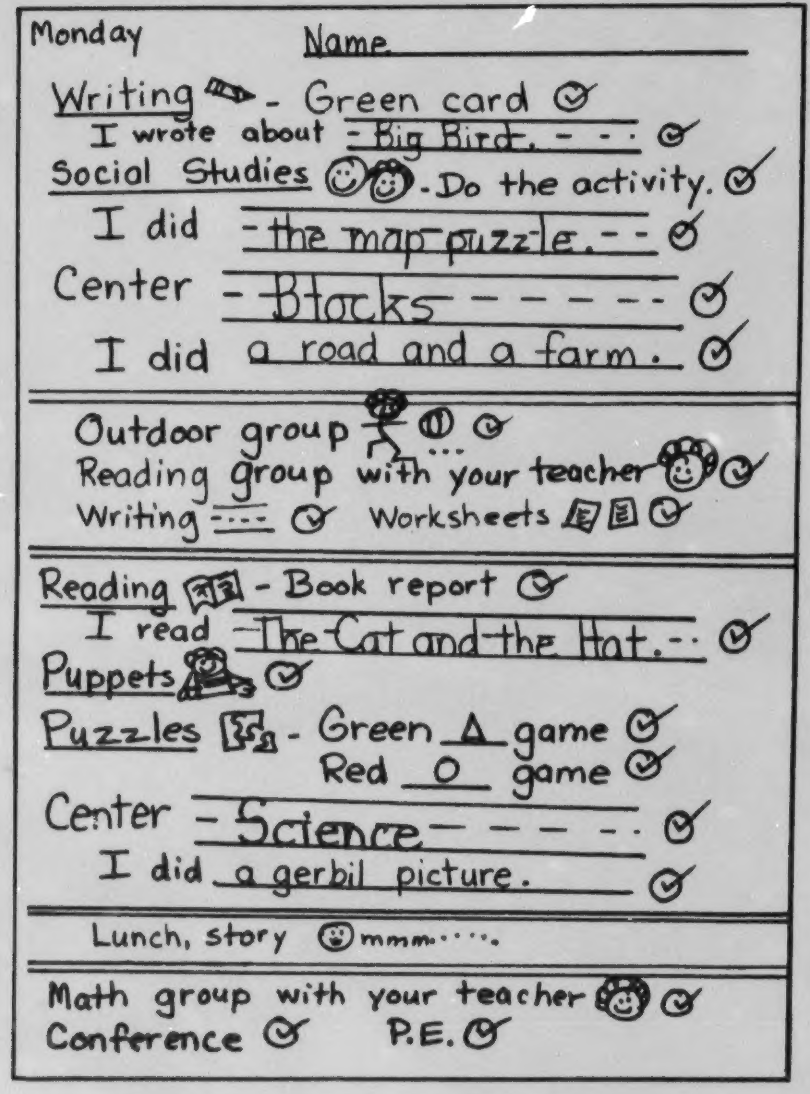
Lunch, story mmm.....

Math group ○ Conference ○
P.E. ○

Stage 4 Contracts

Stage 4 contracts (Figure 30) require children to keep written diaries of their activities. Children write in specifics about what they completed in the science center, what their creative story was about, and so forth. Figure 31 shows a Monday through Friday sequence of Stage 4 contracts.

Figure 30. Stage 4 Contract.



Monday Name ____

Writing - Green card ✓
I wrote about Big Bird. ✓
Social Studies - Do the activity. ✓
I did the map puzzle. ✓
Center Blocks ✓
I did a road and a farm. ✓

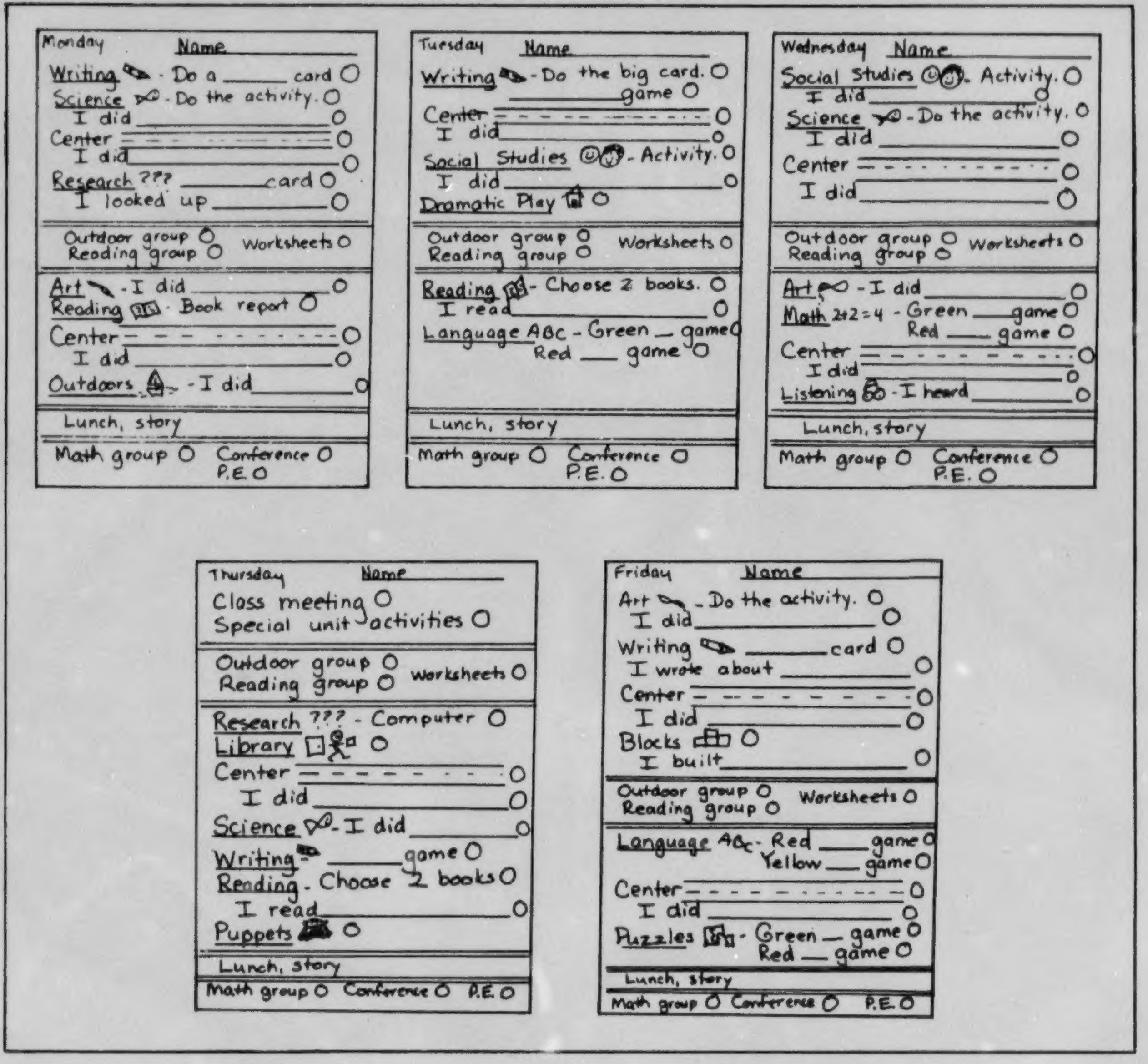
Outdoor group ① ✓
Reading group with your teacher ✓
Writing ✓ Worksheets ✓

Reading - Book report ✓
I read The Cat and the Hat. ✓
Puppets ✓
Puzzles - Green △ game ✓
Red O game ✓
Center Science ✓
I did a gerbil picture. ✓

Lunch, story mmm.....

Math group with your teacher ✓
Conference ✓ P.E. ✓

Figure 31. Monday-Friday Sequence of Stage 4 Contracts.



Monday Name ____
Writing - Do a ____ card ○
Science - Do the activity. ○
I did ____ ○
Center ____ ○
I did ____ ○
Research ??? ____ card ○
I looked up ____ ○
Outdoor group ○ Worksheets ○
Reading group ○
Art - I did ____ ○
Reading - Book report ○
Center ____ ○
I did ____ ○
Outdoors - I did ____ ○
Lunch, story
Math group ○ Conference ○
P.E. ○

Tuesday Name ____
Writing - Do the big card. ○
____ game ○
Center ____ ○
I did ____ ○
Social Studies - Activity. ○
I did ____ ○
Dramatic Play ○
Outdoor group ○ Worksheets ○
Reading group ○
Reading - Choose 2 books. ○
I read ____ ○
Language ABC - Green __ game ○
Red __ game ○
Lunch, story
Math group ○ Conference ○
P.E. ○

Wednesday Name ____
Social Studies - Activity. ○
I did ____ ○
Science - Do the activity. ○
I did ____ ○
Center ____ ○
I did ____ ○
Outdoor group ○ Worksheets ○
Reading group ○
Art - I did ____ ○
Math 2+2=4 - Green ____ game ○
Red ____ game ○
Center ____ ○
I did ____ ○
Listening - I heard ____ ○
Lunch, story
Math group ○ Conference ○
P.E. ○

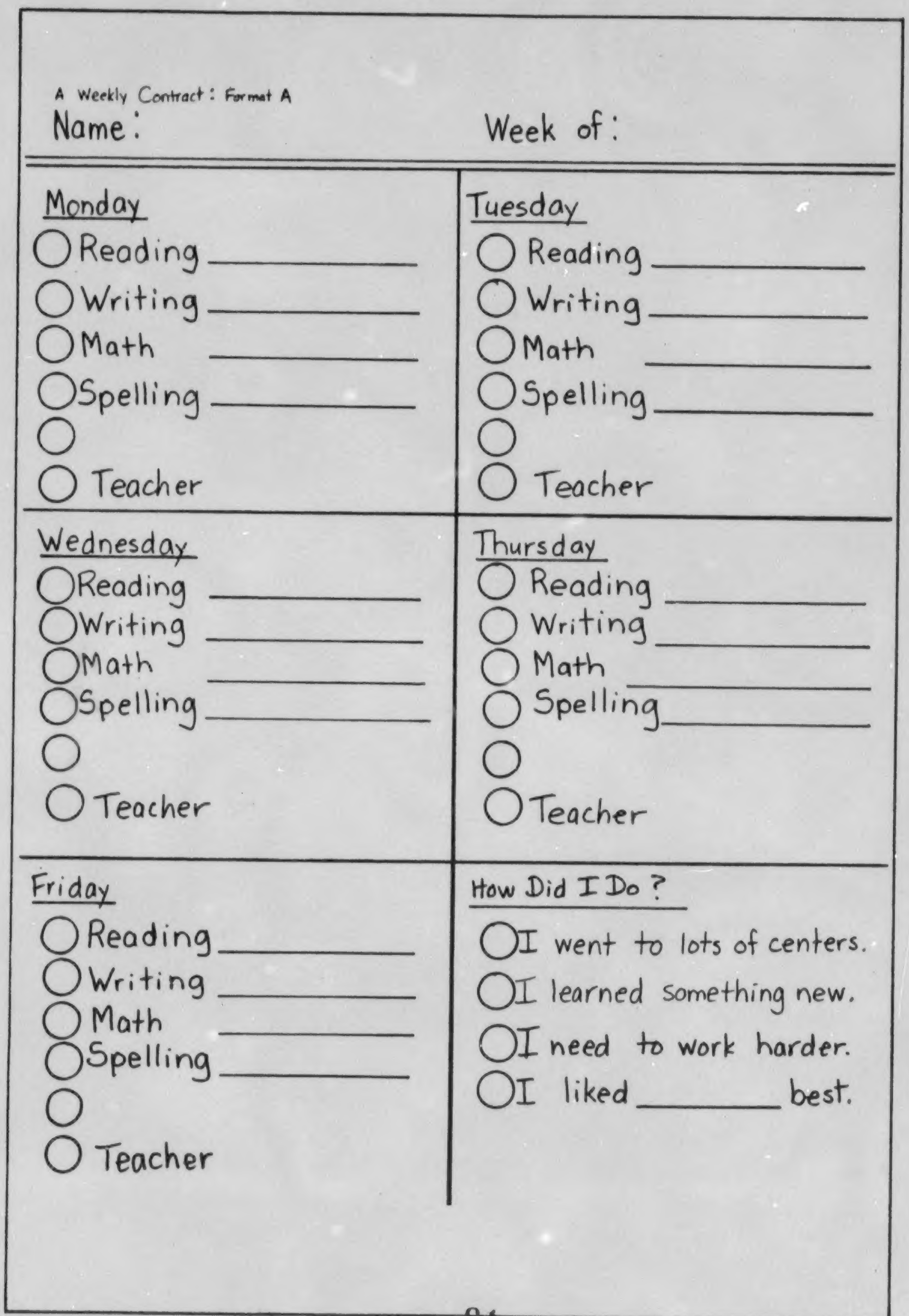
Thursday Name ____
Class meeting ○
Special unit activities ○
Outdoor group ○ Worksheets ○
Reading group ○
Research ??? - Computer ○
Library ○
Center ____ ○
I did ____ ○
Science - I did ____ ○
Writing ____ game ○
Reading - Choose 2 books ○
I read ____ ○
Puppets ○
Lunch, story
Math group ○ Conference ○ P.E. ○

Friday Name ____
Art - Do the activity. ○
I did ____ ○
Writing ____ card ○
I wrote about ____ ○
Center ____ ○
I did ____ ○
Blocks ○
I built ____ ○
Outdoor group ○ Worksheets ○
Reading group ○
Language ABC - Red ____ game ○
Yellow ____ game ○
Center ____ ○
I did ____ ○
Puzzles - Green __ game ○
Red __ game ○
Lunch, story
Math group ○ Conference ○ P.E. ○

Other Contract Formats

Children who become proficient with Stage 4 contracts are often ready to assume responsibility for planning more of their own learning. For example, they may be mature enough to work on a weekly contract like the one shown in Figure 32 (from Day, 1975, p. 183), which has required activities for each day and allows the children to plan some of their own activities. A weekly contract may be combined with a "suggested activities" page (Figure 33, from Day, 1975, p. 185) for the children to use. Children might spend 30 minutes each Monday filling out their weekly contracts.

Figure 32. Weekly Contract, Format A.



A Weekly Contract: Format A

Name:

Week of:

Monday

○ Reading ____________

○ Writing ____________

○ Math ____________

○ Spelling ____________

○

○ Teacher

Tuesday

○ Reading ____________

○ Writing ____________

○ Math ____________

○ Spelling ____________

○

○ Teacher

Wednesday

○ Reading ____________

○ Writing ____________

○ Math ____________

○ Spelling ____________

○

○ Teacher

Thursday

○ Reading ____________

○ Writing ____________

○ Math ____________

○ Spelling ____________

○

○ Teacher

Friday

○ Reading ____________

○ Writing ____________

○ Math ____________

○ Spelling ____________

○

○ Teacher

How Did I Do?

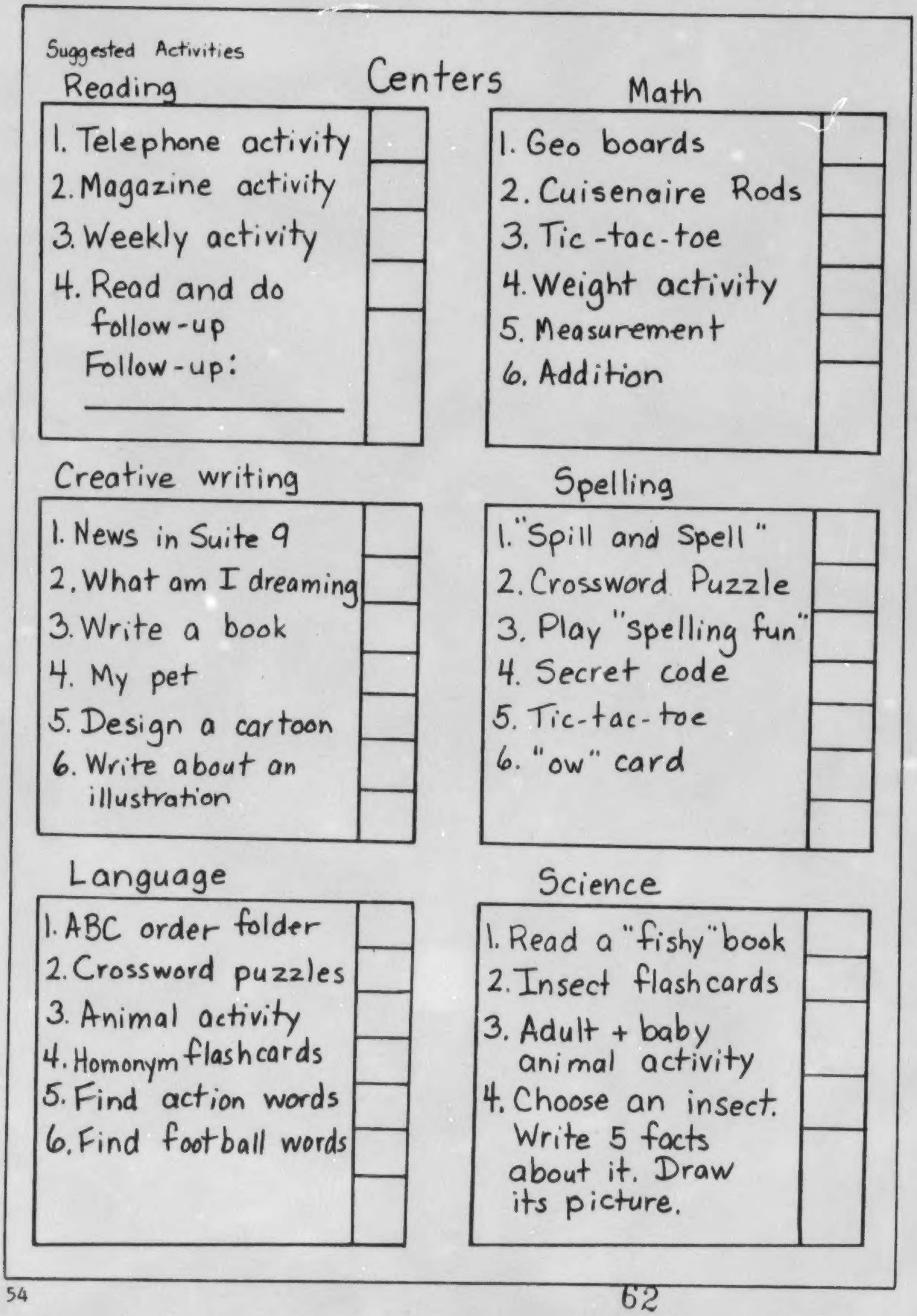
○ I went to lots of centers.

○ I learned something new.

○ I need to work harder.

○ I liked ________ best.

Figure 33. Suggested Activities.



Suggested Activities

Centers

Reading

1. Telephone activity ☐
2. Magazine activity ☐
3. Weekly activity ☐
4. Read and do follow-up ☐

Follow-up: ______________ ☐

Math

1. Geo boards ☐
2. Cuisenaire Rods ☐
3. Tic-tac-toe ☐
4. Weight activity ☐
5. Measurement ☐
6. Addition ☐

Creative writing

1. News in Suite 9 ☐
2. What am I dreaming ☐
3. Write a book ☐
4. My pet ☐
5. Design a cartoon ☐
6. Write about an illustration ☐

☐

Spelling

1. "Spill and Spell" ☐
2. Crossword Puzzle ☐
3. Play "spelling fun" ☐
4. Secret code ☐
5. Tic-tac-toe ☐
6. "ow" card ☐

☐

Language

1. ABC order folder ☐
2. Crossword puzzles ☐
3. Animal activity ☐
4. Homonym flashcards ☐
5. Find action words ☐
6. Find football words ☐

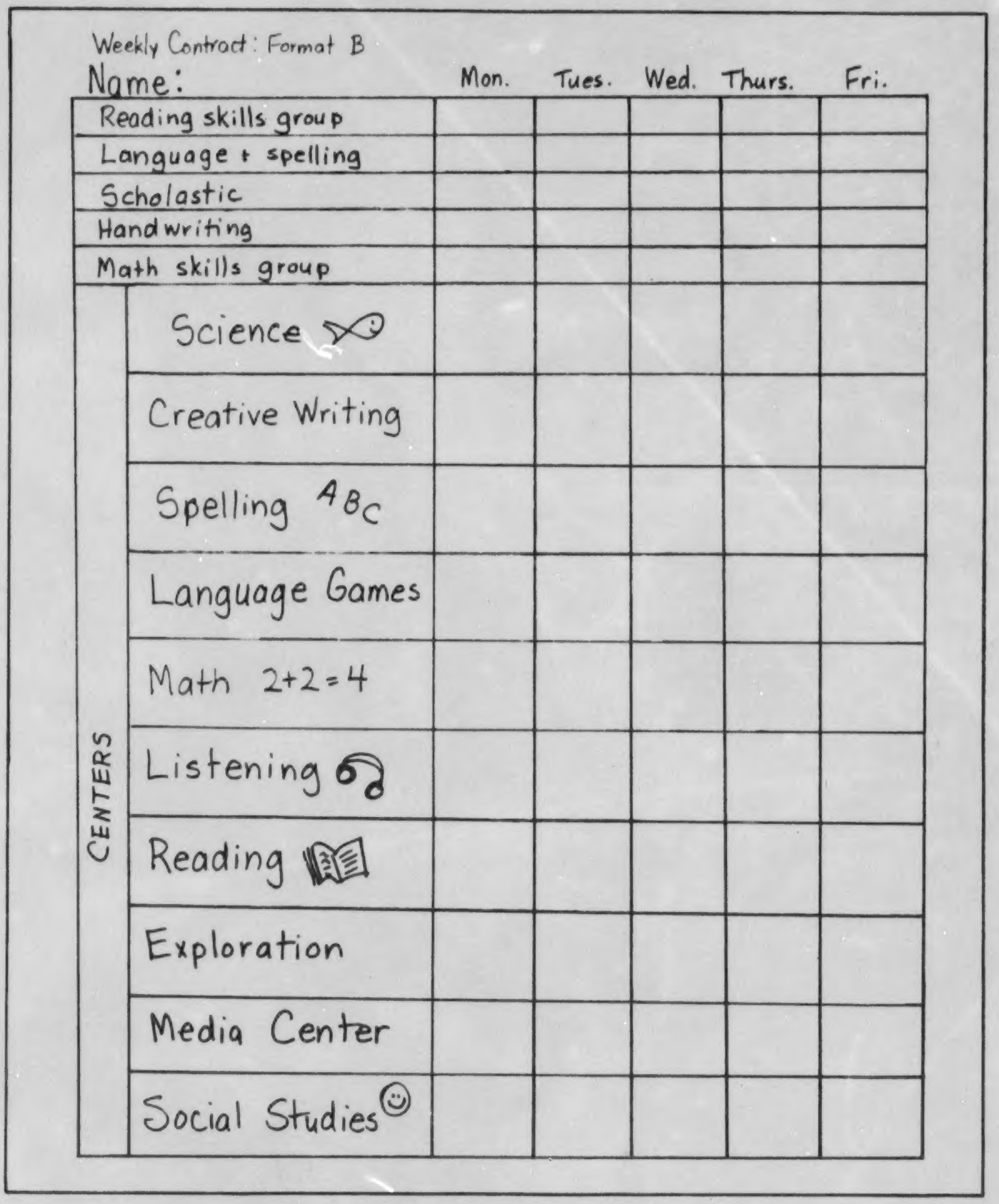
☐

Science

1. Read a "fishy" book ☐
2. Insect flashcards ☐
3. Adult + baby animal activity ☐
4. Choose an insect. Write 5 facts about it. Draw its picture. ☐

Figure 34 (from Day, 1975, p. 187) is another example of a weekly contract. The teacher can easily see whether a child has planned a diversity of experiences. Figure 35 illustrates a weekly contract that reflects more teacher direction and less student planning. Note that in this situation the contract week consists of only four days (with the fifth day used for a variety of other activities, including working with resource teachers in music, art, P.E., and so forth).

Figure 34. Weekly Contract, Format B.



Weekly Contract: Format B

Name:		Mon.	Tues.	Wed.	Thurs.	Fri.
Reading skills group						
Language + spelling						
Scholastic						
Handwriting						
Math skills group						
CENTERS	Science					
	Creative Writing					
	Spelling ABC					
	Language Games					
	Math 2+2=4					
	Listening					
	Reading					
	Exploration					
	Media Center					
	Social Studies ☺					

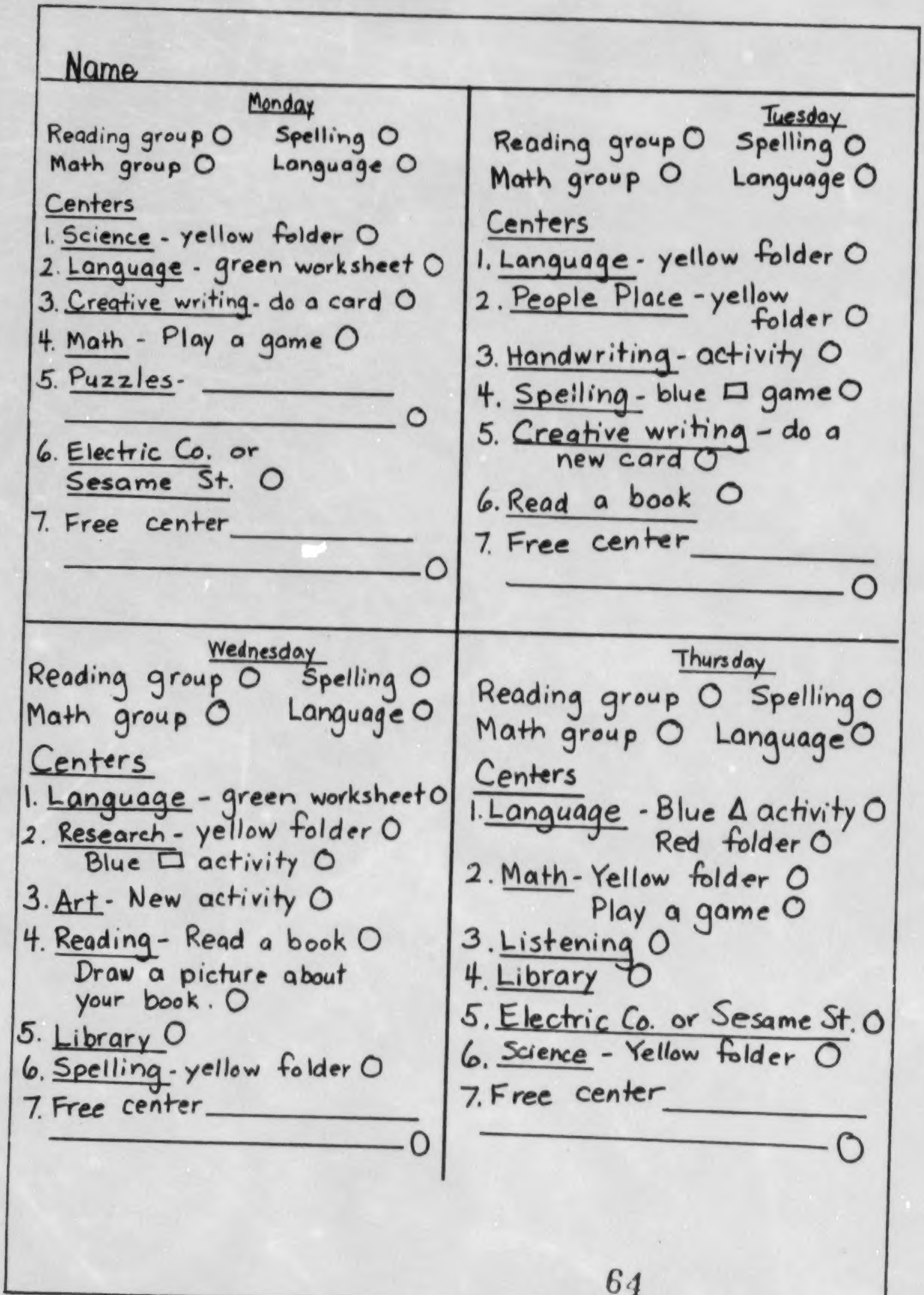


Figure 35. Weekly Contract, Format C.

Name

Monday

Reading group ○ Spelling ○
Math group ○ Language ○

Centers

1. Science - yellow folder ○
2. Language - green worksheet ○
3. Creative writing - do a card ○
4. Math - Play a game ○
5. Puzzles - ________ ________ ○
6. Electric Co. or Sesame St. ○
7. Free center ________ ________ ○

Tuesday

Reading group ○ Spelling ○
Math group ○ Language ○

Centers

1. Language - yellow folder ○
2. People Place - yellow folder ○
3. Handwriting - activity ○
4. Spelling - blue □ game ○
5. Creative writing - do a new card ○
6. Read a book ○
7. Free center ________ ________ ○

Wednesday

Reading group ○ Spelling ○
Math group ○ Language ○

Centers

1. Language - green worksheet ○
2. Research - yellow folder ○
   Blue □ activity ○
3. Art - New activity ○
4. Reading - Read a book ○
   Draw a picture about your book. ○
5. Library ○
6. Spelling - yellow folder ○
7. Free center ________ ________ ○

Thursday

Reading group ○ Spelling ○
Math group ○ Language ○

Centers

1. Language - Blue Δ activity ○
   Red folder ○
2. Math - Yellow folder ○
   Play a game ○
3. Listening ○
4. Library ○
5. Electric Co. or Sesame St. ○
6. Science - Yellow folder ○
7. Free center ________ ________ ○

Contracts for individual centers use another format. Figure 36, from Day, 1975, p. 186, is a contract for the reading center. Figure 37, from Day, 1975, p. 119, is a science center contract about seeds. All the contracts illustrated in this manual are designed to be used more than once with different groups of children as needed.

Figure 36. Reading Center Contract.

Name:

	Mon.	Tues.	Weds.	Thurs.	Fri.
Title of book and story					
Pages read					
Follow-up activity					
Oral activity					

In "Contracts -- A Management System for Open Learning in Early Childhood Education," Forum on Open Education, Day states:

> Contracts often provide the basis for an evaluation system inherent to the success of an environment based on learning centers. They may include the learning objectives, necessary tasks, and provisions for applying acquired skills or knowledge. Along with the use of self-corrective materials, contracts give the child a clear view of his progression in the centers. These two, however, do not work alone. The guiding resource is always the teacher. Teachers supervise, observe, and clarify experiences for and with children as needed and conduct

Figure 37. Science Center Contract.

NAME:

OBJECTIVES:

1. To find out and be able to show or tell how plants produce their own kind through seeds.
2. To find out and be able to show or tell three ways that seeds travel.
3. To find out and be able to show or tell the four parts of a seed.
4. To learn about and be able to tell the difference in six kinds of seeds.
5. To learn that we eat some seeds and be able to show or tell about four kinds of seeds that we eat.

RESOURCES:

Books: Carrot Seed by Ruth Kraus
The Little Seed That Grew by Sara G. Klein
Where Do Seeds Come From? by John Carey
My Petunias by Betsy Smith
Filmstrips: How Green Plants Grow
Seeds Grow into Plants
New Plants from Seeds
Plant Experiments

ACTIVITIES:

1. Take a walk and find all the seeds you can.
2. Try to find or draw pictures of different seeds. Make a book of them and write the names of the seeds.
3. Make a seed book. Paste different seeds on the pages and write the names of the seeds.
4. Plant a bean seed in a cup of dirt and watch it grow.
5. Cut open different fruits and look at the different seeds.
6. Find some pinecones and look for their seeds.
7. Put the pinecone in a bowl of water and see how the pinecone protects its seeds.
8. Soak bean seeds overnight. Pull the bean apart and describe what is inside.
9. Put a bean seed in a small jar with wet cotton. Watch and draw what happens to the seed for two weeks.
10. Look outside for some seeds. Then figure out how they traveled.
11. Play the Seed Game, matching the seed with a picture of the plant it comes from.
12. Sort seeds from the big box into an egg carton.
13. Use an encyclopedia or science book to find out what kinds of seeds we eat.
14. Make a shoe box movie theater that shows how a seed grows into a plant.

REPORTING:

1. Show your collection of seeds and tell about it.
2. Pretend you are a seed and show three ways you could travel.
3. Show your plant and tell us what you did to make it grow.
4. Pass around your Seed Book.
5. Make a mural to show what happens when a seed is in a sunny, moist place.
6. Write a story about what kind of seed you would like to be and why.
7. Make a picture out of seeds.
8. Pretend you are a seed and write a diary about what happens to you every day for two weeks.

> conferences with children to provide immediate feedback of work in centers. Of equal importance is the need for children to meet in small groups to discuss their activities and to analyze their work with each other. Contracts should add to the verbal communication within a classroom and enhance more informal discussions. These observations are the basis for the teacher's own evaluation process--a daily period of time to consider the effectiveness of all learning activities. In determining this effectiveness, consideration should be given to a balance between motor activity and quiet periods, along with the need for integrating intellectual and affective growth, provisions for individual choice and pacing, addition of new materials, flexibility, attention given to children's need for familiar experiences, and the security of some routine.
>
> This constant process of evaluation and observation ensures that the environment will meet each child's changing needs and abilities successfully, thus setting a foundation for independent, effective functioning through initiative and self-discipline. Children in a structured (meaning well organized) open learning environment come quickly to sense the logical necessity for following directions, recognizing the differences and respecting the rights of others -- all in order to facilitate his or her own learning experiences.

Evaluation of contract work is handled daily during a 30-minute conference time. The teacher looks over written work (which has been checked as it was compiled during the school day), staples it to the contracts, then discusses other center activities with the children. Conferencing is vital in keeping children task oriented. Any problems the children experience can be evaluated and reassignments can be made on the following day's contract. The contracts give the parents complete daily or weekly reports of the children's activities.

CLASSROOM MANAGEMENT COMPONENT #3: INTERNAL AND EXTERNAL DISCIPLINE TECHNIQUES

Two aspects of discipline are defined and applied in this program: internal discipline, which refers to the child's own ability to behave in appropriate ways; and external discipline, which refers to the way the child's environment influences the child's behavior.

Objectives

- Define internal and external aspects of discipline
- Describe techniques that facilitate both internal and external discipline
- Describe alternative methods for managing children's classroom behavior.

Environmental Conditions

Early childhood teachers are responsible for developing environmental conditions that facilitate both internal and external discipline. Attention to the developmental needs of young children leads to the design of learning environments that promote appropriate behavior. Such classrooms provide:

- Varied and interesting activities at the correct levels of difficulty for the children
- The opportunity for children to move at their own pace from activity to activity as tasks are completed
- Mechanisms such as contracts and color coding to help children stay on task and handle their own transitions
- Opportunities for children to initiate and choose some of their own activities.

Teacher Behavior

Teachers in early childhood classrooms need to:

- Establish clear expectations
- Monitor children's behavior to facilitate staying on task
- Provide necessary instructional support for children to master new skills
- Explain and model new materials and activities
- Establish clear routines for clean up, transitions, and so forth
- Establish a few clearly defined rules that are used consistently
- Provide opportunity for children to receive feedback on their work
- Provide a warm, supportive atmosphere for learning
- Verbalize what the child is expected to do, rather than stating the negative. Instead of saying "Don't drop that!" say "Set the paint jar down gently on the table."
- Explain the logic behind certain actions, the cause and effect of behavior. "You hold the jar upright like this; otherwise the paint will spill."
- Accept the child's feelings, even when not accepting the child's behavior. When dealing with aggressive behavior, acknowledge the child's anger: "I know something made you angry. What happened?"
- Recognize that both positive and negative attention reinforce behavior. Ignoring behavior or removing the child from your attention is sometimes effective in reducing negative behavior. Appropriate behavior needs consistent positive attention, such as a smile or a word of praise.
- Avoid global praise ("You're a good girl.") in favor of specific praise ("You did a nice job of putting away all the puzzle pieces.").
- Use positive discipline -- praise, rewards, and reason -- in order to help children develop a conscious understanding of their behavior and to help them begin to control their own behavior. Using discipline with negative overtones, such as threats or withholding love or approval, results in a loss of spontaneity in children and often forces children to behave in an inhibited manner. Discipline that often results in a power struggle between adult and child, such as spanking and shouting, often results in more aggressive behavior by children.

Classroom Rules

The following four classroom rules help create an appropriate atmosphere for learning:

1. Everyone must have a job.
2. Walk when in the classroom.
3. Use a soft voice.
4. Respect the feelings and property of others.

When a child has a problem complying with specific rules, follow these steps:

1. Speak to the child, giving a specific goal. For example, if a child is dumping puzzle pieces onto the floor indiscriminately, say, "Josh, please put the puzzle pieces on the floor one at a time."
2. If the problem persists, repeat the directions, giving the child a clear alternative. "Josh, please put the puzzle pieces on the floor one at a time or you will have to put the puzzle away and leave the center."
3. If the child still does not comply, act on the alternative. In this case have the child leave the center and redirect his activities. This approach gives the child clear expectations and helps avoid repeated nagging.

If a child consistently fails to comply with the classroom rules, a more extensive approach to dealing with the problem is required. The steps for dealing with chronic problems include:

1. Careful analysis of the child's needs and abilities to determine whether the child's program needs to be modified. This might include a change of contract, work with a resource teacher, and so forth.
2. Conferences with parents to gain insight and support.
3. Restricting a child from certain centers where he or she has had repeated problems.
4. Restructuring the child's day by having the child check in with the teacher after each activity or having the child work alone, with the teacher bringing the activities to the child. The child may be phased back into the normal routine gradually.

Early Childhood Education:

Curriculum Organization
and Classroom Management
Filmstrip 2

A Typical Day

"A Typical Day" follows a first grader through each step of his school day. Matthew's day includes activities in a variety of learning centers, math and reading skills groups, and social studies and science unit activities. Matthew uses his contract as a plan for the day's activities. The presentation emphasizes the application of the curriculum organization components -- learning centers, skills groups, and units -- and the classroom management components -- color coding, contracts, and discipline.

This section of the manual includes a log of Matthew's day that correlates his activities with those of the classroom teacher. Evaluation techniques recommended for use in a developmental classroom are also included, using Matthew and his work in the evaluation examples.

SCRIPT

- The curriculum organization components in this presentation on early childhood programs are learning centers, skills groups, and units of study.
- Color coding, contracts, and discipline are the classroom management components discussed in this presentation.
- These six components, three in curriculum organization and three in classroom management, fit together to make early childhood classrooms function effectively.
- We will follow a child through a typical day in an early childhood classroom of five- and six-year-old children.
- We will be following Matthew. Matthew is six years old and a first grader. He is typical of the boys and girls that work in this classroom.
- During the school day, which runs from 8:15 until 2:30, Matthew works in large and small instructional groups and in the classroom learning centers.
- Matthew's schedule starts each morning at 8:15 with home base group. At 8:45 he begins work in the learning centers. Outdoor break occurs at 9:30. Matthew's reading group meets at 9:50; after his reading group he goes back to work in the centers until 11:30, when it's time for lunch. Story time follows lunch, from 12:00 -12:30. Matthew then returns to the learning centers. At 1:00 he is called to math group. At 1:30 it's time for physical education. Conferences and "read-in" are the final events in his day. At 2:30 it's time for Matthew to gather his materials and go out to his bus to go home.

- Matthew starts his day with home base group, which is similar to the family groups or circle times that begin the morning for many early childhood programs. The home base routines help Matthew get organized for his day's work.
- At 8:15 the bell rings. Matthew comes into the classroom. He puts his lunch box into his cubby and starts his home base activities.
- First, he puts his tickets in the attendance chart. His tickets tell the teacher that Matthew is present and that he has brought his lunch to school with him today.
- Next, Matthew picks up his contract and joins his friends at the home base tables. He's ready to plan his day.
- To start, he copies his assigned tasks, which are written on the board, . . .
- . . . into the appropriate spaces on his contract.
- Now Matthew must decide on his free choice centers. Using this centers chart to help him, he selects two centers and lists them on his contract.
- Matthew has completed his contract. Now he's ready to have it reviewed by his teacher.
- Markie Pringle, Matthew's teacher, goes over the day's contracts with each group. She checks the contracts for accuracy and explains to the children exactly what to do in each learning center.
- After everyone's contracts have been filled out, all of the children meet together as a group. New activities for the learning centers are explained by the teacher. For example, today's art center activity, "Drawing a Crowd," involves the children in learning about perspective.
- In order to expand the children's knowledge about the science and social studies units being studied, brief lessons on the unit topics are included each day as part of the home base activities. The new science unit is about animals and their habitats, so the children listen to a story about pandas. Then they are ready to start work in the learning centers.
- Both the teachers and the children work together in the learning centers for a 45-minute period. This time gives the children a chance for direct teacher feedback on their work in the centers.
- Matthew's first learning center is science. He takes a clothespin from the science chart and pins it on himself. The clothespin is his ticket for entering the center.
- Matthew plays the new science game, matching the animals with their habitats.
- Next, he completes a worksheet about animal habitats. Because Matthew is a first grader, his contract directs him to do a worksheet that requires reading and writing skills. Before he leaves the science center, Matthew's teacher will evaluate his worksheet.
- Matthew checks off the science center on his contract and refers to his contract to see what other center assignments need to be completed.
- He decides to work on his social studies assignment about the circus.
- The social studies center chart still has four clothespins available, so Matthew selects one, pins it on, and enters the center.
- Matthew's job in the social studies center is to make an animal for the circus train. The task card directs him through all the steps in this activity.
- Next, he works with the flannel board circus, arranging the circus objects in sequential order by size.
- Clean-up time is signaled by blinking the classroom lights. Matthew is in the social studies center when the lights blink, so he helps straighten up this area.

- The children return to home base group. Each center is checked by a child to see if all the clothespins are back on the charts and to see if all the activities have been replaced correctly.
- Outdoor break is next on the agenda.
- During outdoor break, the children enjoy 20 minutes of self-directed play. They also have fresh fruit or vegetable snacks at this time.
- From 9:50 to 11:25, reading skills groups are taught. While some children are meeting with their reading skills group, others continue their work in learning centers.
- Matthew's reading group is working on such tasks as phonics and new vocabulary. Written tasks are explained and assigned. Each child in this group also receives an independent reading assignment from an individualized reading kit.
- Matthew goes to a home base table to complete his reading tasks. While the children work at the tables, the teacher calls each child to read with her one at a time.
- When Matthew meets with his teacher, he reads orally and answers comprehension questions about his book. Then he returns to his table to complete his written work.
- When Matthew finishes his written work, he has it evaluated by one of the classroom aides.
- At 10:30, another group of children is called for reading. Matthew returns to the learning centers.
- Matthew refers to his contract to decide on his next activity. He chooses art.
- He works on a crayon rubbing in the art center.
- Next, his contract tells him he can select one of his free choice activities. He chooses outdoors. Matthew wants to work in the tool center, but the only clothespins left on the outdoor chart are for water and sand. He decides that he will come back to the outdoor center later.
- He looks at his contract again, and he decides to go to the writing center. Matthew has two assignments in the writing center.
- First, he plays a game, matching rhyming words and pictures.
- Second, he uses a circus card to help him complete a story about circus animals.
- Now Matthew moves to his other free choice center, listening. Today's story is Harry, The Dirty Dog. At 11:25 the lights blink to signal clean up. The children return to home base to get ready for lunch.
- Lunch is scheduled from 11:30 to 12:00.
- Children line up for the trip to the cafeteria.
- In the lunchroom, children eat with their home base group.
- After lunch the children return to the classroom for story time.
- Sharing treasures from home, stories, and songs are all part of this 30-minute period.
- At 12:30 it's time for math groups to begin. Children who are not yet meeting with their math group return to work in the learning centers.
- Matthew checks the outdoor centers chart. At last! A tools clothespin!
- Matthew and Harris build a new means of transportation with the construction materials in the tools center.

- Next, Matthew goes to the language arts center.
- He plays a board game about vowels with several of his friends. After language, Matthew has time for one more center before his math group meets.
- His next task is research. His contract directs him to choose an activity with a high level of difficulty. Matthew selects a research card about the circus. He uses the encyclopedia to identify circus performers. After getting his research paper evaluated, he marks off research on his contract.
- At 1:00 Matthew is called to his math group. The children learn a math game, "Fraction Circus,' related to today's math lesson.
- Next, new math concepts are explained, and the written work for today's math group is assigned.
- The children do their math work at the home base tables. As they finish their tasks, an aide corrects their work with them. Then the children return to centers to finish their contract work. The lights blink at 1:30. It's time for the final clean up and return to home base.
- Physical education is scheduled each day from 1:30 to 2:00.
- The children meet with the P.E. teacher twice a week.
- For physical education on other days, they use the creative playground or have supervised play in the gym or on the courts.
- At 2:00 the children come inside for conference time. The teachers have individual conferences with each child, reviewing the games the children have played and the activities they have completed in the learning centers that day and checking over the children's written work.
- Children who are not having their conferences stretch out on the floor and read library books.
- Matthew is called for his conference. His papers are stapled to his contract, and he reviews his day with his teacher. Any unfinished tasks are reassigned for completion the next day.
- Matthew has a happy face on his contract to show his parents, along with a complete record of his day's work. Matthew's parents get further information concerning his progress through report cards that are sent home every nine weeks and through formal and informal parent-teacher conferences.
- At 2:30 it is time for Matthew to gather his materials from his cubby and get ready to go home.
- He has had a very busy day.
- Matthew's day was full and exciting. He has many things to tell his parents.

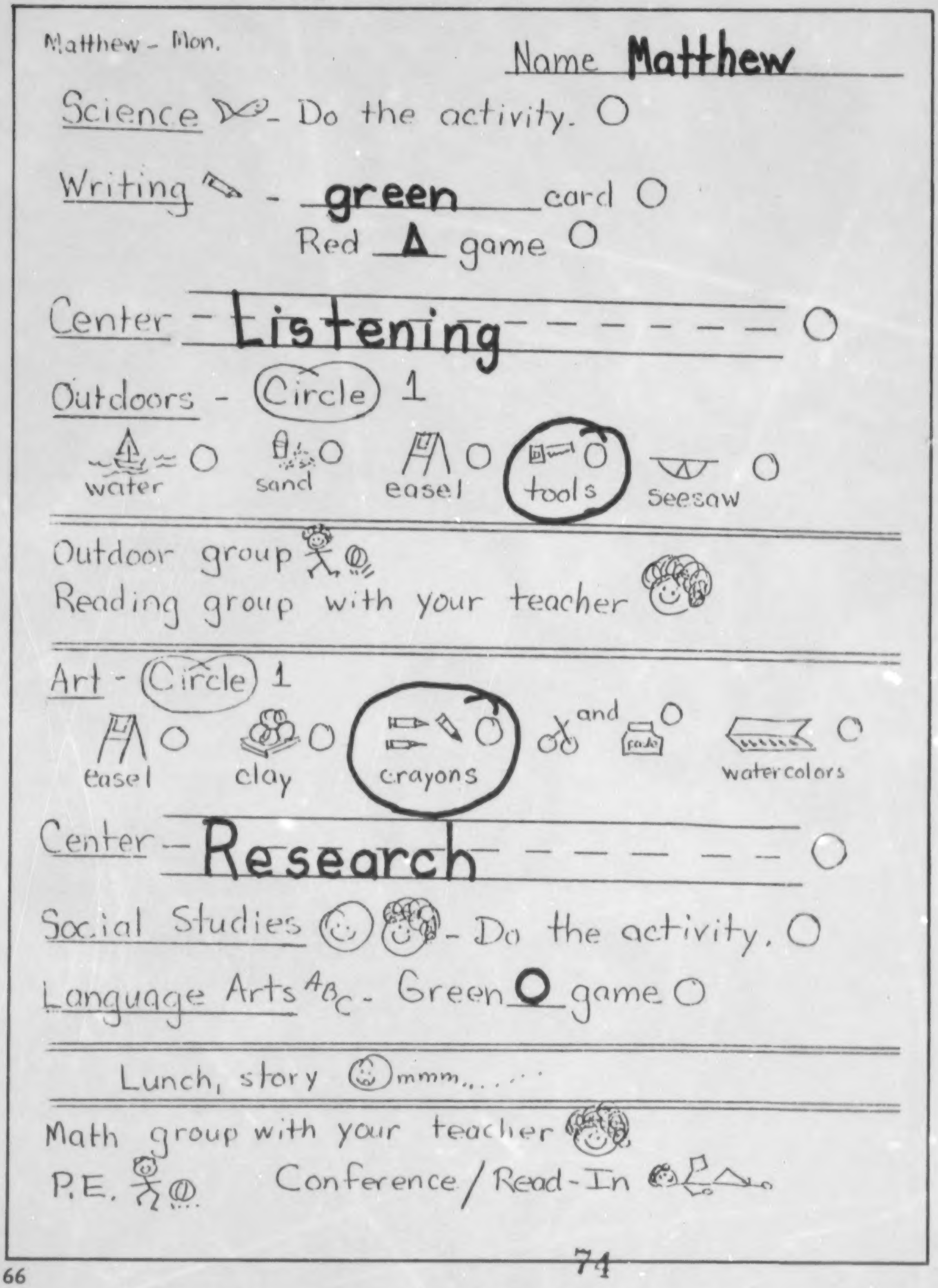
OBJECTIVES

- Describe how the six components -- learning centers, skills groups, units, color coding, contracts, and discipline -- are integrated into a typical day for a child in a developmental classroom
- Organize a daily schedule of students and teachers in a developmental classroom
- Implement recordkeeping techniques for a developmental program

MATTHEW'S CONTRACT

Matthew uses a contract like the one shown in Figure 38 to guide him through the school day.

Figure 38. Matthew's Contract.



Matthew - Mon.

Name Matthew

Science - Do the activity. ○

Writing - green card ○
Red △ game ○

Center - Listening - - - - - - ○

Outdoors - Circle 1
water ○ sand ○ easel ○ [✓ tools ○] seesaw ○

Outdoor group
Reading group with your teacher

Art - Circle 1
easel ○ clay ○ [✓ crayons ○] and ○ watercolors ○

Center - Research - - - - - - ○

Social Studies - Do the activity. ○

Language Arts ABC - Green ○ game ○

Lunch, story mmm......

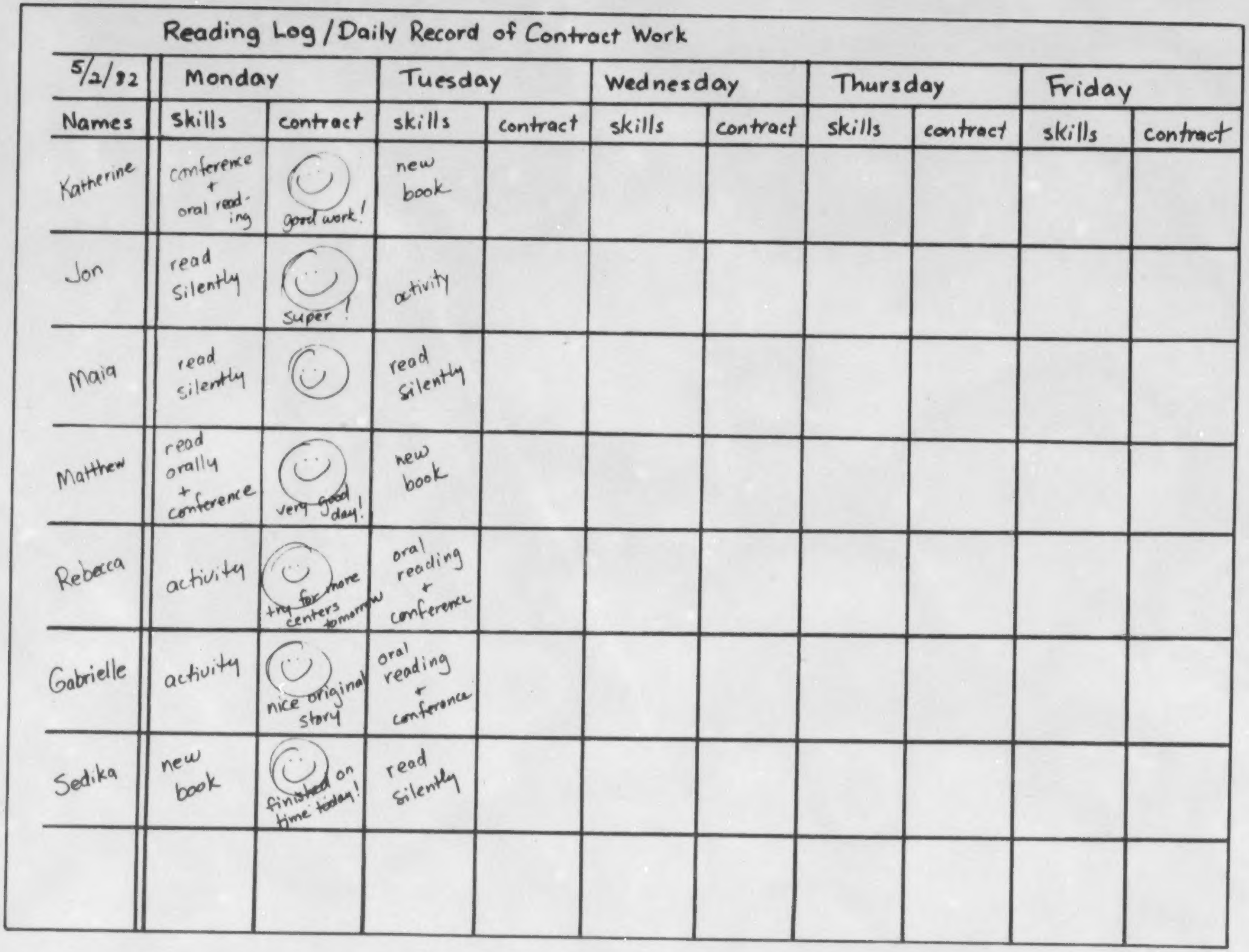
Math group with your teacher
P.E. Conference / Read-In

DAILY SCHEDULE OF MATTHEW AND HIS TEACHER

Following is a log of the daily activities of Matthew and his teacher as shown in Filmstrip 2.

Time	Teacher	Matthew
8:00-8:15 Planning		
8:15-8:45 Home Base	The teacher moves from group to group, helping the children fill out their contracts; then she reviews contract activities with each contract group. Next, she calls the children to home base group. She handles daily routines, teaches mini-lessons about the science or social studies units, and explains any new center games and activities to the children.	At 8:15 Matthew comes into the classroom, puts his lunch box in his cubby, places his tickets in the attendance chart to indicate his lunch and snack order, and picks up his contract and folder. He fills in his contract, reviews the contract with his teacher, and joins the class for home base group. After routines such as reading the menu and checking the attendance chart are completed, the class learns how to do the new learning center activities. Today there is a new game in the science center that will require Matthew to match animals with their habitats. After learning how to play the game, Matthew listens to a story about pandas.
8:45-9:25 Centers Time	The teacher sends each child to a learning center. She handles this transition by referring to each child's contract and selecting a center from it. The teacher meets several goals by directing the children at this time: 1. Children are distributed evenly among the centers. 2. Partners can be assigned to encourage interaction among children who might not otherwise work together. 3. Some children may need to complete their most difficult center assignment first during the time when the teachers are available to work with them in the centers.	Matthew is sent to science. He plays the animal habitats game and completes a worksheet about habitats. He then checks off science on his contract and refers to his contract to decide what to do next. He chooses social studies, where he makes a circus poster and plays with the flannel board circus.

Teacher	Matthew
Each teacher works in an assigned area, covering several centers. Matthew's teacher is responsible for helping children in reading, science, math, dramatic play, and puppets. She helps children find their assigned games, starts them on their activities, moves among the children checking their written work, and helps them manage their transitions from one center to the next.	
9:25 Lights Blink, Signaling Clean Up	
After helping the children clean up their work, the teacher returns to the home base area where the class is gathering. Each child has an assigned job on the helper's chart. Among these jobs are the centers' helpers. Two children are assigned to each center. After general clean up, they check the center to be sure that all materials are back in place and that all clothespins are on the charts. If anything is missing or out of place, they make an immediate effort to correct the problem. The children are basically responsible for maintaining their environment, with assistance from the teacher.	Matthew cleans up his work in social studies, checks off social studies on his contract, and returns to home base. His job is to check the puzzle center. He reports that everything in puzzles is "A-OK"!
9:30-9:50 Outdoor Break	
Aides take the children outdoors for morning break while the teachers have 15 to 20 minutes for planning, getting skills group materials organized, and so forth.	Matthew enjoys a visit to the playground and has his snack outdoors.
9:50-11:20 Reading Skills Groups and Center Work	
Teachers work with children in reading groups teaching writing, reading, and language skills. The teachers keep daily notes on each child's work in reading (see Figure 39). Note that the example in Figure 39 covers only Monday and Tuesday. The log is used as a record to show what Matthew did on Monday during reading group and how he did on his contract work for the day. At the end of the day the teacher plans what Matthew will do on Tuesday. The log is for both recordkeeping and planning. At the end of the day on Tuesday, during conference time, the teacher will record how Matthew did on that day's contract work and fill in reading plans for Wednesday.	Matthew's group meets as soon as break is over. Children in other reading groups continue their work in the learning centers. Matthew's group works on compound words and short vowel sounds. Written tasks are explained and assigned, and each child is given a reading assignment. Children complete their assignments at the home base work tables. Matthew is called to read aloud to his teacher and to answer comprehension questions about his story. Matthew gets his finished papers checked by an aide. Then he puts them away in his folder. He looks at his contract and decides to go to the art center next.



Reading Log / Daily Record of Contract Work

5/2/82	Monday		Tuesday		Wednesday		Thursday		Friday	
Names	skills	contract	skills	contract	skills	contract	skills	contract	skills	contract
Katherine	conference + oral reading	☺ good work!	new book							
Jon	read silently	☺ super!	activity							
Maia	read silently	☺	read silently							
Matthew	read orally + conference	☺ very good day!	new book							
Rebecca	activity	☺ try for more centers tomorrow	oral reading + conference							
Gabrielle	activity	☺ nice original story	oral reading + conferance							
Sedika	new book	☺ finished on time today!	read silently							

Figure 39. Reading Log.

Teacher	Matthew
Math plans are recorded in a separate log that is kept on a clipboard along with a weekly plan sheet (see Figure 40) for the reading and math groups. Note that plans in the weekly plan sheet in Figure 40 are only recorded for Monday. Plans for Tuesday can be formulated at the end of the day on Monday. Reading logs and weekly planning sheets can be found in the Appendix as Worksheets 2 and 3.	In art Matthew does a crayon rubbing. Next, he decides to go to the outdoor tool center, but there are no tool center clothespins available. He decides to go to the writing center and come back to the tool center later. In the writing center, Matthew plays a rhyming game and completes a circus story. His next center is listening, where he listens to a read along version of Harry, the Dirty Dog.

11:25 Clean Up

The teacher helps the children clean up the centers, put away their work, and gather in home base group.	Matthew puts away his earphones and returns to home base.

11:30-12:00 Lunch

12:00-12:30 Story Time, Music, and Sharing

12:30-1:30 Math Skill Groups and Centers

The teachers work with the children in small groups to develop math skills and concepts.	Matthew returns to centers, since his math group has not yet been called. He starts outdoors; this time there is a clothespin for tools. He and Harris construct a vehicle with wheels. Matthew goes to the language arts center next and plays a game about vowels. One of Matthew's free choices is research. He selects a card about the circus and looks up his answers in a children's encyclopedia. At 1:00, Matthew is called to his math group. The teacher explains a new math game to the children and then assigns math worksheets. Matthew completes his work at the home base tables and gets it checked by an aide.

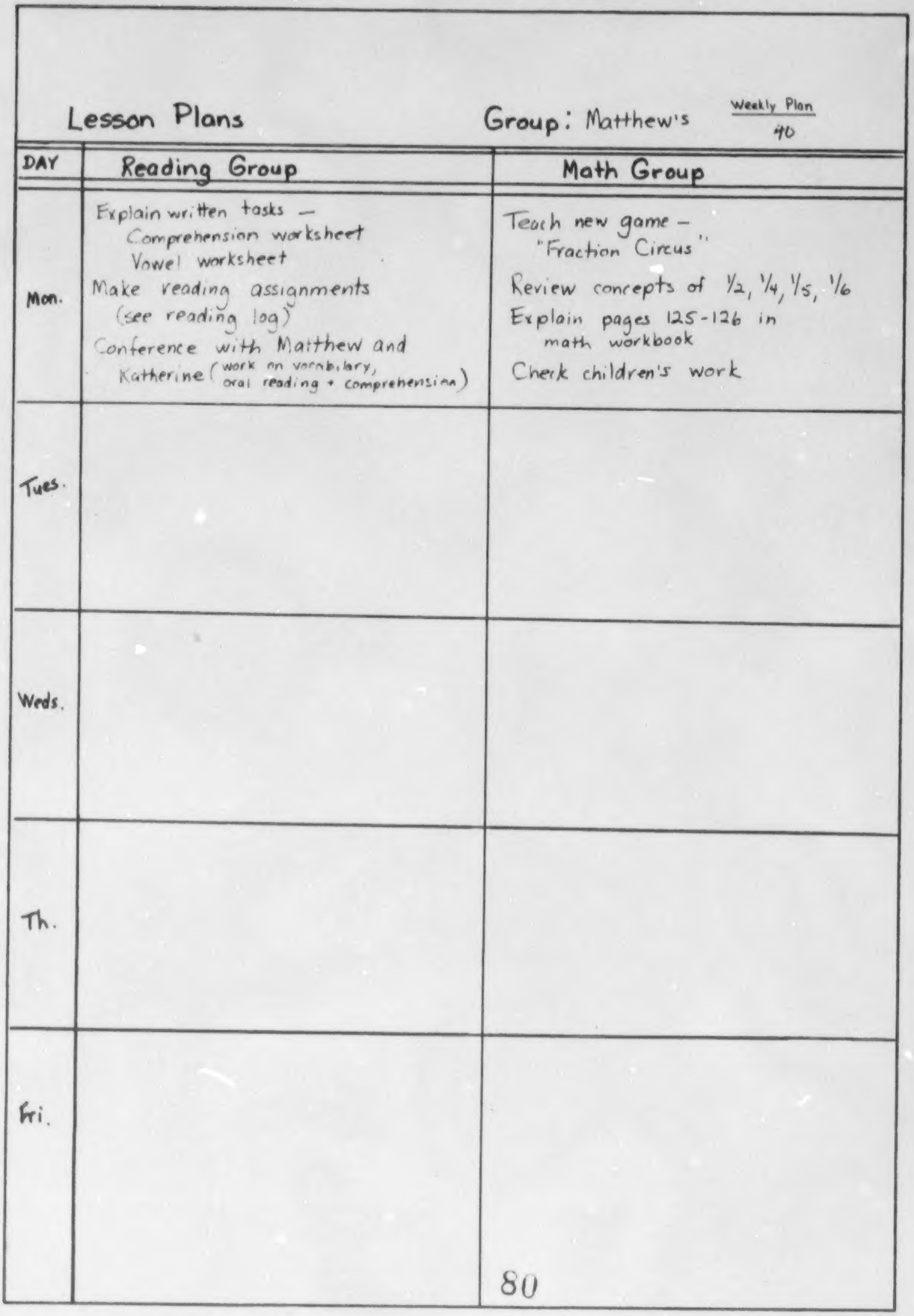
1:25 Lights Blink for Clean Up

The children pull out all of the day's work from their folders, place their contracts on top, and give the packets to their teacher to be stapled.	Matthew turns his work in to his teacher.

1:30-2:00 Physical Education

The physical education teacher meets with the children twice weekly. On the other three days the classroom aides follow the plans provided by the P.E. teacher.	Matthew enjoys the creative playground today.

Figure 40. Weekly Planning Sheet.



Lesson Plans

Group: Matthew's

Weekly Plan
40

DAY	Reading Group	Math Group
Mon.	Explain written tasks — Comprehension worksheet Vowel worksheet Make reading assignments (see reading log) Conference with Matthew and Katherine (work on vocabulary, oral reading + comprehension)	Teach new game — "Fraction Circus" Review concepts of 1/2, 1/4, 1/5, 1/6 Explain pages 125-126 in math workbook Check children's work
Tues.		
Weds.		
Th.		
Fri.		

Teacher	**Matthew**
2:00-2:30 Conferences and Read-In	
The teachers call each child for a conference. Written work has been checked during the day as it was completed, enabling the teacher to check over the papers briefly to ensure accuracy. Then the teacher discusses the day's center activities with the child. The completed contract is sent home with a symbol such as a happy face and appropriate notes, serving as a daily report to the parents. The teachers also keep daily notes about contract work on their clipboards. Children not having a conference are stretched out on the floor reading books.	After returning to the classroom, Matthew is called to meet with his teacher for a conference about his day's work. He talks with his teacher about the story he heard in the listening center and the vehicle he built in the tool center. They also look over his worksheets and discuss the quality of his work. They decide that he has had a good day. Matthew puts his papers in his cubby and returns to his rest spot to finish reading his book.
2:30-2:40 Dismissal	
	Matthew goes home after a busy day.

RECORDKEEPING

Day (1975) states that recordkeeping is very important; accurate and detailed reports of the individual child's developmental levels and what he or she is doing must be kept. Recordkeeping should be an informal, simple process, with records being easy to keep and easy to read. Conferences, observation notes, and comments by both pupil and teacher should be kept rather than grades. The records may take many forms, among them anecdotal notes, files of children's work, records of formal and informal tests, checklists, and, most important, teacher observations (both informal and systematic, and often over a long period of time).

Evaluation can provide the teacher with information on the child's learning style and progress, feedback on the teacher's own performance, and information about how successfully the learning environment is arranged.

Evaluation is for the child as well as for the teacher. Not only does evaluation tell the teacher if the child is ready to move on to another concept or if there are learning gaps that need special attention, but it also allows for the child to make mistakes and errors. Correct answers are viewed as only one aspect of learning, as errors are desirable when they offer information necessary for further learning. Teachers should encourage excellence in individual students. Teachers may request that work be improved; however, this is not seen as failure. Rather, the request is viewed as constructive criticism, with the teacher emphasizing good aspects of the work, those that are not so good, and those that could be improved.

Two considerations are necessary in evaluating pupil progress in an open learning environment: the ways and instruments necessary for assessing student progress and the ways and instruments for reporting this progress.

Since evaluation is an ongoing process, the teacher, in addition to being a guide and resource person, must also be a very keen observer. The choices made by the child give the teacher insight into the child's learning. What he rejects or ignores offers clues to whether the child and the teachers are succeeding in what they are trying to do. Does the child seem interested in exploring the new materials in the math center? How long does he remain in the center attempting to solve the problems? What activity does he choose when he finishes reading with the teacher? Does the child seem interested enough to want to share with a classmate or an observer in the room? Through observation of activities, discussions with students, and listening to students talk to each other, the teacher has a basis for formulating future work. In addition, students share in the responsibility of deciding some of the things they are interested in learning.

Because there are so many things going on simultaneously in an open classroom, the teacher must keep a record of activity if there is to be a continuum of purposeful learning. This record may contain the amounts of time spent at particular tasks, the different activities in which children participate, the quality of the participation (for instance, learning task cards completed; gaps in learning that imply the need for individual or small group work with the teacher; the variety of activities, including cognitive, social, emotional, and physical growth), and recommended next steps. This record might be obtained through direct observation of individual students and through written work that would indicate individual achievement.

Student records may be kept in folders or notebooks and on index cards. The information should be concise and descriptive; it should be dated and compared monthly, with changes in individual achievement indicated.

Records should indicate general behavior patterns as well as academic achievement. Pleasant or disturbing family occurrences, illnesses, accidents, and highlights at school should all be noted, as these may be important in assessing the child's overall development. These records indicate the social interaction and emotional development to which academic learning is greatly related.

Class records, family grouping records, or team records must also be kept. Through these records an analysis can be made of the activities shared by a larger number of children. The students may help to keep these records, which often take the form of charts or lists indicating centers visited; stories read, told, or written; special projects undertaken; commercial and teacher-made games played; and learning task cards completed. Observation of this record should reveal balance in a variety of areas; if lack of variety is indicated, steps can be taken to restore balance (see Figure 41).

Figure 41. A Chronological Anecdotal Record for Matthew.

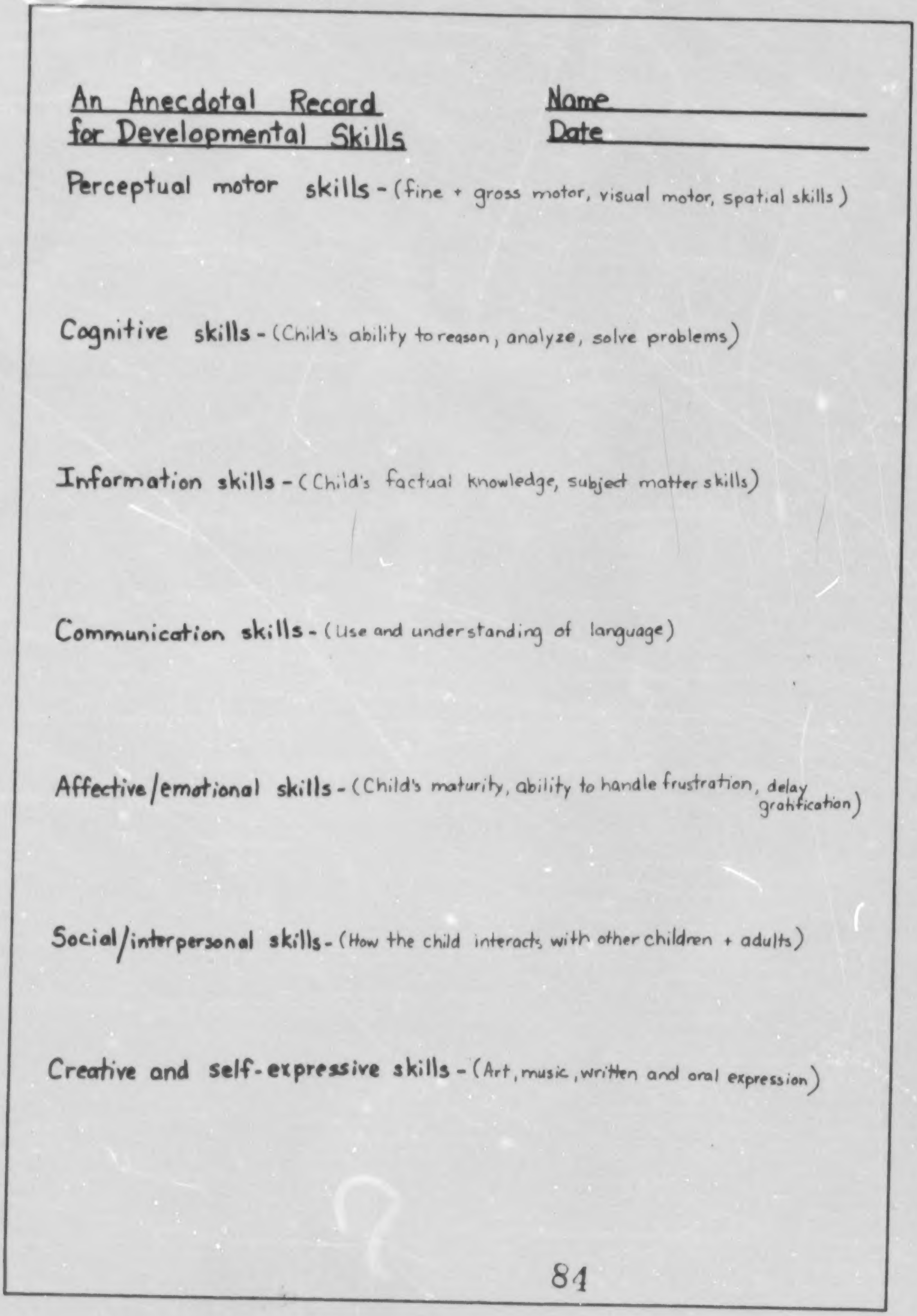
9/20	Writing. Matthew used a "complete the story" task card about an elephant who came to school. Concentration on task is excellent. Finished story in appropriate length of time. Had difficulty with lined paper and with transferring story from task card to paper. Continue with handwriting worksheets each day in reading skills group.
9/29	Art. Matthew did his version of a rainbow today using the chalk easel. Overlapped colors and blended them -- very sophisticated approach to the use of color for a six-year-old.
10/1	Lunch. Continues to be a bit of a crisis for Matthew. Concerned about whether his ticket has run out, at which table he should sit, whether he can leave the table to get a napkin, and so forth. He's overly conscientious about routines and continues to be easily distressed about rules. Work on helping him relax and feel secure both in and outside of the classroom.
10/8	Science. Matthew read a book about dolphins to five-year-old Aaron; then they drew a variety of dolphin illustrations. Matthew consistently works well with other children.
10/15	Math. Math concepts are more difficult for Matthew than are other academic activities. Since most skills come easily to him, he's having a bit of a struggle adjusting to the frustration involved in mastering the math facts we are presently working on. Have sent home facts to review and will continue to have Matthew work with concrete objects and games as well as with the math workbook. Slowing the pace may also help. Will reduce written work until he's more sure of himself.

Anecdotal records may be kept in chronological sequence, keeping in mind the need to observe the child in a variety of activities. Figure 42 shows another technique for keeping anecdotal records; it is organized around areas of development.

Students should also be encouraged to keep records through their own diaries and activities. The diary helps a child understand his own progress and helps the teacher learn what seems to interest the child most or gives him the greatest satisfaction. Accuracy is not as important in keeping a diary as is the recording of how the child feels about himself and the work he is doing. Records or logs can also be used by the child to help plan activities he intends to undertake during the day. Either throughout the day or at the end of the day, he may summarize his accomplishments. He may also wish to have conferences with the teacher or team of teachers regularly during the day.

There are a variety of ways to help children record their daily activities. Some records are quantitative in nature and serve only to summarize the amount of activity. Others include qualitative judgments on the part of the student and/or his teacher. Contracts are examples of records or logs that may be used for recording activities or

Figure 42. Anecdotal Record for Developmental Skills.



An Anecdotal Record
for Developmental Skills

Name ____________________
Date ____________________

Perceptual motor skills - (fine + gross motor, visual motor, spatial skills)

Cognitive skills - (Child's ability to reason, analyze, solve problems)

Information skills - (Child's factual knowledge, subject matter skills)

Communication skills - (Use and understanding of language)

Affective/emotional skills - (Child's maturity, ability to handle frustration, delay gratification)

Social/interpersonal skills - (How the child interacts with other children + adults)

Creative and self-expressive skills - (Art, music, written and oral expression) centers visited. Contracts not only represent a method of recordkeeping, but are also a means of helping the child manage his time and organize his learning experiences. By using contracts, the student assumes responsibility for his learning process.

Written reports and notes taken from teacher observations and student-kept records provide the teacher with evaluation not only of student performance but also of teacher performance. Another important means of evaluating teacher and student performance is the use of tape or video recorders. These recordings allow the teacher to view the learning situation and what her role in it has been from an objective point of view. By viewing the tape, the teacher becomes an observer rather than a participant, and can gain valuable insight into her role in the learning process.

Through the use of records such as the ones suggested here, the teachers' additional records, and the children's diaries and logs, teachers should be able to identify each child's general skills achievement and the areas in which he or she needs special help. Also, teachers can see the kinds of work each child has been doing and how he or she has progressed.

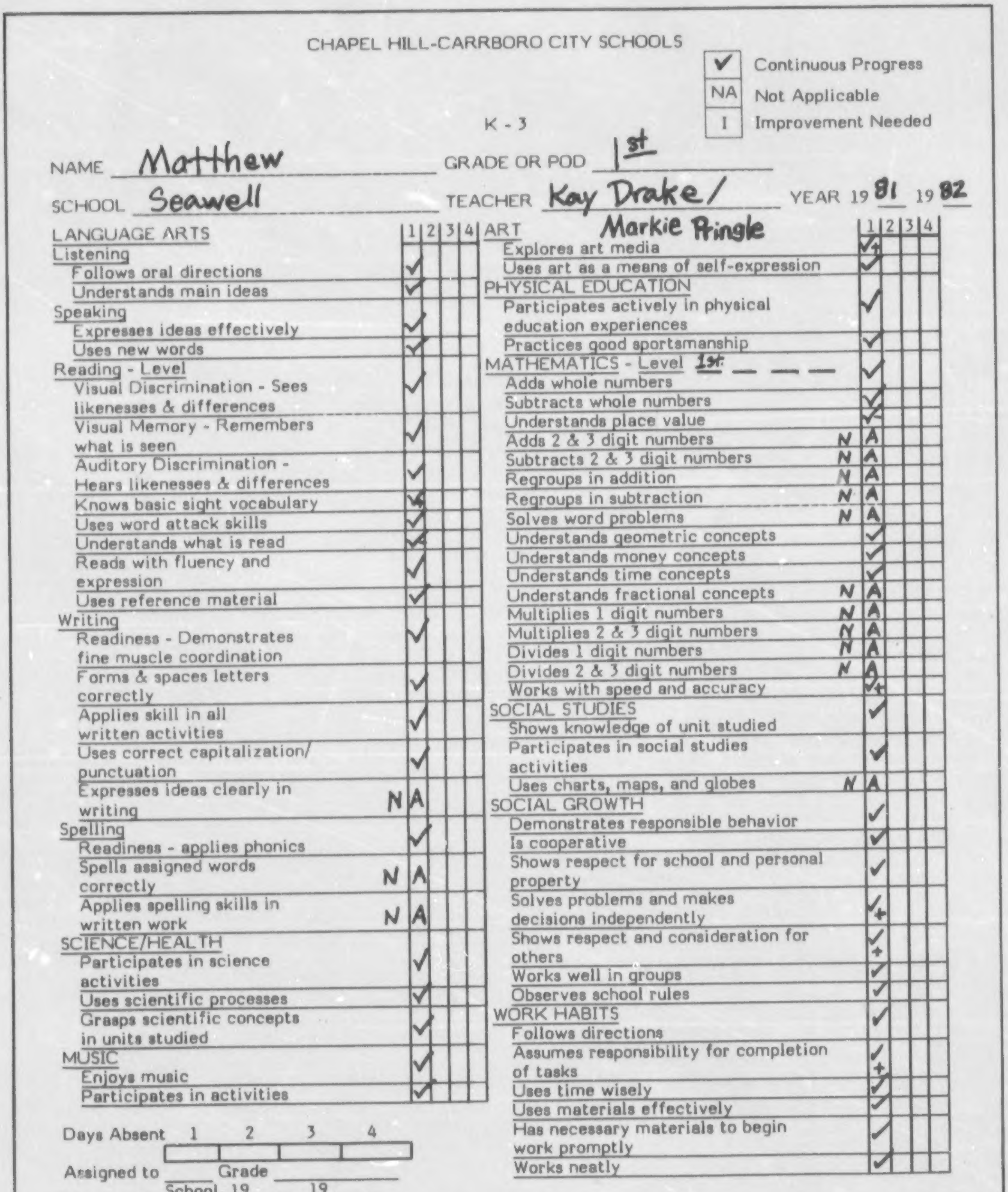
In addition to the teachers and the children, however, a third party must also be involved: the parents. Parents play a vital role in the evaluation of each child throughout his or her educational program. Home information (early experiences, language development, position in the family, interests that the child has at home, behavior and attitude among family members, and so on) is necessary in helping teachers understand the child, as these experiences often affect the child's school experience. Parent-teacher conferences should become a regular part of the school program, as they are helpful not only in keeping parents informed of their child's growth but also in engaging their support for school activities. Parents are entitled to know exactly what their child is learning and what he or she might be having difficulty doing. Samples of the child's work should be shown and analyzed during the conference periods. Along with the records the teachers have kept (both individual and group) and the records and diaries that the individual children have kept, the parent-teacher conferences should provide occasions for shared evaluation.

In this early childhood classroom, formal parent conferences are held twice a year, and informal conferences are scheduled as needed. Contracts, often with personal notes added, are sent home daily, and telephone conferences and newsletters are also used to maintain parent-school communication. Report cards are sent home every nine weeks.

Figure 43 is Matthew's report card. Figure 44 is a first-grade basic skills checklist. Other skills checklists and inventories can be found in the Appendix as follows:

- Worksheets 4 and 5 are language arts skills checklists used in the Chapel Hill-Carrboro City school system.

Figure 43. Matthew's Report Card.



CHAPEL HILL-CARRBORO CITY SCHOOLS

K - 3

✓	Continuous Progress
NA	Not Applicable
I	Improvement Needed

NAME Matthew GRADE OR POD 1st

SCHOOL Seawell TEACHER Kay Drake/ Markie Pringle YEAR 19 81 19 82

LANGUAGE ARTS	1	2	3	4
Listening				
Follows oral directions	✓			
Understands main ideas	✓			
Speaking				
Expresses ideas effectively	✓			
Uses new words	✓			
Reading - Level				
Visual Discrimination - Sees likenesses & differences	✓			
Visual Memory - Remembers what is seen	✓			
Auditory Discrimination - Hears likenesses & differences	✓			
Knows basic sight vocabulary	✓			
Uses word attack skills	✓			
Understands what is read	✓			
Reads with fluency and expression	✓			
Uses reference material	✓			
Writing				
Readiness - Demonstrates fine muscle coordination	✓			
Forms & spaces letters correctly	✓			
Applies skill in all written activities	✓			
Uses correct capitalization/ punctuation	✓			
Expresses ideas clearly in writing	NA			
Spelling				
Readiness - applies phonics	✓			
Spells assigned words correctly	NA			
Applies spelling skills in written work	NA			
SCIENCE/HEALTH				
Participates in science activities	✓			
Uses scientific processes	✓			
Grasps scientific concepts in units studied	✓			
MUSIC				
Enjoys music	✓			
Participates in activities	✓			

	1	2	3	4
Days Absent				

Assigned to _____ Grade __________

__________ School, 19 _____ 19 ____

ART	1	2	3	4
Explores art media	✓+			
Uses art as a means of self-expression	✓			
PHYSICAL EDUCATION				
Participates actively in physical education experiences	✓			
Practices good sportsmanship	✓			
MATHEMATICS - Level 1st				
Adds whole numbers	✓			
Subtracts whole numbers	✓			
Understands place value	✓-			
Adds 2 & 3 digit numbers	NA			
Subtracts 2 & 3 digit numbers	NA			
Regroups in addition	NA			
Regroups in subtraction	NA			
Solves word problems	NA			
Understands geometric concepts	✓			
Understands money concepts	✓			
Understands time concepts	✓			
Understands fractional concepts	NA			
Multiplies 1 digit numbers	NA			
Multiplies 2 & 3 digit numbers	NA			
Divides 1 digit numbers	NA			
Divides 2 & 3 digit numbers	NA			
Works with speed and accuracy	✓+			
SOCIAL STUDIES				
Shows knowledge of unit studied	✓			
Participates in social studies activities	✓			
Uses charts, maps, and globes	NA			
SOCIAL GROWTH				
Demonstrates responsible behavior	✓			
Is cooperative	✓			
Shows respect for school and personal property	✓			
Solves problems and makes decisions independently	✓+			
Shows respect and consideration for others	✓+			
Works well in groups	✓			
Observes school rules	✓			
WORK HABITS				
Follows directions	✓			
Assumes responsibility for completion of tasks	✓+			
Uses time wisely	✓			
Uses materials effectively	✓			
Has necessary materials to begin work promptly	✓			
Works neatly	✓			

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- Worksheets 6, 7, and 8 are math skills checklists used in the Chapel Hill-Carrboro City school system.
- Worksheet 9 is a readiness skills checklist.
- Worksheet 10 is a first-grade basic skills checklist. Figure 44 is an example of this checklist filled out for seven boys and girls. Note that each child either is checked off or his or her level of mastery is indicated.
- Worksheet 9 is filled out in a manner similar to Worksheet 10.
- Worksheets 11 through 17 consist of a seven-page inventory of basic concepts for five- and six-year-olds. This inventory is administered individually at the beginning of the school year.

Figure 44. First-Grade Basic Skills Checklist.

1st Grade Basic Skills Checklist Skills Name	Writes name	Names upper case letters	Names lower case letters	Knows letter sounds	Reads color words	Reading level	Uses basic sight vocabulary	Uses phonics skills	Works independently	Completes tasks/uses contracts effectively	Writes numbers	Counts to —	Adds to —	Subtracts to —	Writes upper + lower case letters correctly		
Matthew	✓	✓	✓	✓	✓	Primer	✓	✓	✓	✓	to 100	to 100	1-5	1-5	✓		
Tameka	✓	✓	✓	✓	✓	Primer	✓	✓	✓	✓	to 100	to 100	1-5	1-5	✓		
Susan	✓	✓	✓	✓	✓	1st reader	✓	✓	✓	✓	to 100	to 100	1-5	1-5	✓		
Steven	✓	✓	✓	✓	✓	Primer	✓	✓	✓- very meticulous slow	- but correct	to 100	to 100	1-5	1-5	✓-		
Joel	✓	24/26	20/26	✓	6/8	1st PP	needs extra help	not always	✓	with help	to 50	to 80	not yet	not yet	most		
Brennan	✓	✓	✓	✓	✓	3rd PP	✓	✓	✓	✓	to 100	to 100	1-5	1-5	✓		
Montego	✓	✓	✓	most 24/26	✓	2nd PP	✓-	✓	-	not yet	to 50	to 50	beginning to master 1-5		most		
Caroline	✓	21/26	19/26	most 20/26	✓	2nd PP	✓-	✓	✓	✓	to 50	to 100	1-5	1-5	most		

Early Childhood Education:

Curriculum Organization
and Classroom Management
Filmstrip 3

A Unit of Study

This presentation shows the organizing and teaching of science and social studies units through mini-lessons in home base groups and through learning center activities. Filmstrip 3 details the steps necessary in planning and implementing this approach.

SCRIPT

- Color coding, contracts, and discipline are classroom management components that help early childhood programs function smoothly.
- Curriculum organization components for early childhood programs include learning centers, skills groups, and units of study.
- Let's take a detailed look at how to organize a unit of study.
- Each unit is a plan for teaching a specific topic. Social studies and science concepts are usually taught this way.
- Units of study can be organized so that lessons presented to the children in large and small groups are correlated with activities planned for the children in learning centers.
- The components of a unit of study are concepts to be taught, instructional objectives based on these concepts, lessons designed for use with groups, activities planned for learning centers, and evaluation procedures.
- Here Kenric is engaged in learning about simple machines in a unit called "Moving Around." Let's look at how this unit was developed.
- Concepts, objectives, activities, and evaluation techniques must be planned in order to implement the "Moving Around" unit.
- These six concepts about motion and simple machines were selected for this unit.
- Let's look in detail at how to plan appropriate unit activities for three of these concepts: motion, work, and simple machines.
- The first concept is motion, the movement of an object from one place to another.
- This concept forms the basis for the instructional objective "that children will distinguish between an object in motion and one at rest." Group activities and science center activities are selected that will help the children master the objective. Evaluation is included as part of both the group activities and the science center activities.

- In a group, children listen to a book about motion, Everything Moves. The book defines motion and gives the children some background information to use when they do the day's activity in the science center.
- Next, the teacher explains in detail the science center activity. Today children are to illustrate different ways that people and objects move around.
- In the science center, children will find a card with instructions reminding them of their task. This activity is designed so that children of different ability levels can complete it successfully.
- The children's work is evaluated on two levels:

  1. Did they demonstrate understanding of the concept of motion? That is, did they draw an object or person moving?
  2. Also, did they do the task to the best of their ability? Results will be different for each child.

- When the children finish the activity on motion, their work is displayed on the science center bulletin board.
- The next concept is work. Work has been done when an object is pushed or pulled over a distance.
- The instructional objective -- that children will classify situations as work or nonwork -- forms the basis for group activities and science center activities. The children's worksheets will be checked for accuracy in order to evaluate how well they understand the concept.
- During group time, children talk about their ideas of work and compare them with the scientific definition of work. The teacher explains the new science center materials.
- Today's science center activity starts with a game board designed for use by children of all levels of ability. In this game children must classify each situation as work or nonwork in order to complete their turns.
- After playing the game, children complete a worksheet that helps clarify their concept of work. The worksheets are for different levels of skill development; the yellow, red, and green stickers help direct children to an activity designed for their skill level.
- The yellow sticker identifies worksheets at the least difficult level. Children are asked to color the pictures showing work being done and to trace the words under each picture.
- A red sticker marks the folder with the intermediate level worksheets. Children who are beginning to read and write are asked to label the pictures correctly.
- The most difficult worksheets are in a folder labeled with a green sticker. On these worksheets children are expected to both read and write. The learning center activities and individual worksheets are left in the science center for two to three days before new materials are added. This gives all the children a chance to use them.
- Teachers check each child's worksheets as they are completed. If necessary, children revise their work until they demonstrate mastery.
- Our third concept -- simple machines -- includes levers, inclined planes, pulleys, and the wheel. This concept forms the basis for a number of learning experiences in the unit.
- Let's look at just one simple machine, the wheel. As with the other unit concepts, activities are planned for group instruction and for the science center based on the instructional objective. Evaluation techniques are included for both group and center experiences.

- Wheels and how they help reduce friction are the focus of today's group discussion. Then the teacher demonstrates the science center experiment.
- Simple illustrations on the wheels task card remind the children of the steps in the experiment. After the task card is explained by the teacher during group time, it is placed in the science center for individual use.
- For Step 1 in the wheels experiment, the children try to move a load of blocks on a flatbed that has no wheels.
- For Step 2, they try moving the same load on a flatbed with wheels. After several trials, they discover it's easier to move the load with wheels than without them.
- Children document the results of their wheels experiment on a worksheet.
- Teachers evaluate the children's learning by discussing the experiment with them and by checking the children's worksheets for accuracy.
- "Moving Around" concepts can be used to develop experiences in learning centers other than science. For example. . .
- . . .children in the research center use task cards about motion and simple machines. Matthew is discovering the many uses of wheels.
- Children in the art center devise creative ways to use simple machines. This magic bubble machine is Bradley's invention, while Kelly's simple machine produces bubble gum.
- In the outdoor center, children continue their experimenting with a real lever, the seesaw.
- In the writing center, Lena tries to imagine what Grover will do with his simple machine.
- Several techniques help the teachers implement the unit of study. First, materials are designed for independent use by young children. Second, activities are added to the centers a few at a time, in a logical sequence; and third, children receive feedback about their work.
- For example, this experiment in the science center is designed to be completed independently by young children. The use of an illustrated task card helps remind the child of the correct procedure for the activity.
- At the start of a unit of study, only a few materials are placed on the science center shelves.
- As new unit concepts are taught, new materials are added. Some are commercial materials, and others are made by the teachers.
- When children finish their activities in the science center, they are required to get their work checked by a teacher before moving to another center. This requirement increases the children's accuracy in the use of materials.
- The unit of study approach requires a great deal of planning. Working with another teacher and exchanging unit materials on a scheduled basis can help to effectively manage the amount of time this approach requires.
- After a unit has been completed, it can be stored and used again. For example, in a multi-age classroom, the science units are rotated on a two-year basis. This ensures that children in the program as five-year-olds will not repeat the same units the next year when they are six.
- The components of each unit include concepts, objectives, group activities, center activities, and evaluation procedures.
- The unit of study creates a highly involving learning experience for young children.

OBJECTIVES

- List and define the components of a unit of study
- Develop a rationale for a hands-on, integrated approach to teaching science and social studies to young children
- Plan a unit of study based on this prototype.

RATIONALE FOR AN EXPERIENTIAL APPROACH TO UNIT TEACHING

Instruction in science and social studies should be based on the manner in which young children learn. Children are naturally curious and imaginative, eager to explore and understand their world. In order to develop this understanding, children need a number of hands-on experiences.

A rationale for an experiential approach to teaching science and social studies can be drawn from the work of Piaget. Piaget (Evans, 1975) classifies children's thinking from about the age of two or two-and-a-half to about age seven as "preoperational." Preoperational thought is characterized by the inability to think logically or abstractly. Children in this stage are:

1. Not yet able to conserve. That is, changes in spatial relationships and dimensions confuse them. For example, they do not realize that a short, fat cylinder of clay can be rolled into a long, narrow cylinder without a loss of matter. They are unable to recognize that the change in width has been compensated for by a change in length. In other words, they are able to focus on the beginning or end of a transformation, but not on the transformation itself.
2. Bound by perception. They focus on one attribute of an object at one time (color, size, shape, and so forth). They are unable to consider all the attributes of an object simultaneously. For example, children dealing with objects that are attracted to a magnet and objects that are not may decide that size of the object is the relevant factor in determining what the magnet will pick up.
3. Egocentric. They view the world and its natural phenomena from their own perspective. For example, children perceive the moon as following them home at night.

The preoperational child's view of reality is also different from that of the adult. Children at this stage do not have a clear understanding of cause and effect relationships. For example, children ascribe feelings and voluntary actions to inanimate objects: "The wind blows because it wants to." Also, children explain cause and effect without reference to logic (for instance, cars run because mommies and daddies drive them, not because they have internal combustion engines).

Preoperational thinking is not deficit thinking; it is simply a result of the child's developmental stage. This stage of intellectual development does have important implications for the teachers of young children.

Piaget emphasizes the need for children at this stage to experience and explore their world and its phenomena in order to expand their thinking and move to the next level of cognitive development. Young children need programs designed to help them learn to:

1. Observe. Do not just superficially examine an object, but discover all its properties by using all of the child's senses. For example, the properties of sand can be understood by seeing it, touching it, pouring it, mixing it with water, and so forth.
2. Classify. Group objects by a common property. Numerous relationships can be established when children group seashells by size, shape, color, species, texture, and so forth.
3. Predict. Will an object stick to a magnet? Through exploration with a number of objects, children may discover that size is not the relevant factor in determining an object's attraction to a magnet.
4. Communicate. Piaget regards interaction with adults and peers as essential in children's ability to further understand their world. Through interaction children discover that there are viewpoints other than their own, they develop more advanced language skills, and they assimilate their knowledge through the use of language.

DEVELOPING EXPERIENTIAL UNITS STEP BY STEP

One approach to implementing an experiential program in a logical, systematic manner is to organize a unit of study that uses both group activities and learning center activities. The components of this approach are:

1. Concepts. Basic understandings drawn from the content being studied (for instance, motion, work, fast and slow, simple machines, and so forth).
2. Objectives. Exactly what the child will be able to do after completing activities based on the concepts (for instance, the child will distinguish between an object in motion and one at rest).
3. Group activities. Background information on the concepts being studied; filmstrips, books, games, and so forth, presented to the children in group situations (for instance, reading Everything Moves to a group; showing a filmstrip about simple machines).
4. Center activities. Planned sequence of learning center activities related to the concepts being studied, such as experiments set up in the science center, task cards in the writing and research centers, art activities, and so forth. Children may experiment to see whether a loaded flatbed with wheels is easier to load and move than a loaded flatbed without wheels, or look up "friction" in the research center. The unit concepts are integrated into all areas of the classroom. Each learning center has activities planned on several different levels to meet the needs of children at varying stages of development. Different types of materials are used, including manipulatives, games, and written tasks.
5. Evaluation. Assessment of the children's learning. May include observing their work in the learning centers or analyzing their verbal responses in group and the quality of their written work.

"Moving Around," the unit example in Filmstrip 3, was organized through the following 13-step process:

Steps	Examples
Step 1. Determine unit requirements. How long will the unit last? How many activities are needed for the science or	This unit is planned for a four week period. Two new activities a week are planned for the science center. Activities

social studies center? One each week? Two? How many different levels of difficulty need to be included? How many task cards are needed in the writing center? The research center? How many centers will be used to help teach the unit concepts? Will activities in math, reading, blocks, and art be correlated with the unit topic? How often will large group activities occur? How many large group lessons will be needed?

Step 2. Select unit topic. Gather materials that provide background information -- reference books from the library, teachers' manuals, subject area books on the children's level, games and activities, filmstrips, and so forth.

Step 3. Select seven or eight basic concepts appropriate for the age of the children being taught.

Step 4. Classify the concepts from simple to complex.

Step 5. Plan an insructional objective for each concept. These objectives are stated in terms of what the child will be able to do during or after completion of the activities related to the concept.

Step 6. Plan multi-leveled or open-ended activities for each concept. Include both group mini-lessons and center activities related to the concept.

are either open-ended (appropriate for all of the children in the class) or multi-leveled (different activities planned for children with different levels of skill development).

Two ten- or fifteen-minute mini-lessons are planned for home base group each week. These lessons are correlated with the two new activities introduced in the science center. Each week six new task cards are added in the research center. These cards are multi-leveled as follows: two easy, two intermediate, and two difficult. A total of eight easy, eight intermediate, and eight difficult research cards are needed for the four week period. Six task cards are added each week in the writing center. They too are multi-leveled -- two easy, two intermediate, and two difficult -- and, as with the science center, a total of eight easy, eight intermediate, and eight difficult cards are needed. Puzzles, books, games, art projects, and other activities that correlate with the unit topic are added to the appropriate centers over the four week period. See Figures 45-48 for completed unit plans for the "Moving Around" unit.

"Moving Around" is a unit on physical science that introduces the children to some basic laws of physics and to the concept of simple machines.

The "Moving Around" concepts, in order of complexity, are motion, fast-slow, work, lift-drop, push-pull, and simple machines (wheels, inclined planes, levers, pulleys).

For the concept of motion, the instructional objective states, "The child will distinguish between an object in motion and one at rest." See Figures 45-48 for more examples of instructional objectives.

Group and center activities are planned to teach the concept of motion. In home base group children listen to a book about motion, Everything Moves, and discuss it with their teacher. In the science center they choose a card from a grab bag. The cards are labeled with various motion words, such as run, jump, and hop. The child tries out the motion and then plans an illustration of an object using this motion. She may use a variety of books to get helpful ideas for the illustration, or she may choose to draw herself in motion. She colors the picture and cuts it out for the science bulletin board. This is an example of an open-ended activity. Each child can engage in this particular activity at her own level of expertise.

Activities planned for understanding one of the simple machines being studied (the pulleys) illustrate another way to plan for individual differences. All of the children engage in hands-on experiments with the pulleys in the science center, after which three different worksheets are planned as follow-ups to the experiment. The easiest worksheet asks the children to cut out and paste the parts of a pulley together correctly; the intermediate level worksheet asks the children to label the parts of the pulley; and the most difficult worksheet asks the children to answer questions about the pulleys and how they work.

Step 7. Analyze activities for balance and variety among hands-on experiences, use of games, types of written tasks, and so forth.

See Figures 45-48.

Step 8. Analyze tasks for the level of independence required by the children. A complicated cooking activity may require that a teacher be with the children at all times, and therefore it may not be the best choice for a science center that will be used independently by the children during the entire school day. The cooking activity might be done during skills group, and a classification game on food groups could be planned as the science center activity.

Step 9. Write unit plans.

See Figures 45-48.

Step 10. Allocate available materials. Decide which concepts such materials as books, puzzles, and games correlate with and in which center they should be used.

Figure 45. Unit Plan for "Moving Around," Page 1.

Area: Science | Topic: Moving Around

Concept: Motion -- The movement of an object from one place to another.

Days	Objective	Group Activity	Science/Social Studies Center Activity	Other Centers
1, 2, & 3	The children will distinguish between an object in motion and one at rest.	Day 1 - Read Everything Moves and discuss. - Explain science center activity to the group. Day 2 - Filmstrip: "Doing What You're Doing" Day 3 - Record: "Having Fun with Bert and Ernie" Evaluation: Appropriateness of children's oral responses.	Days 1, 2, 3 "Grab bag" with cards labeled "walk, run, fly, crawl, creep, jump, hop, etc." Each child pulls a card out of the grab bag and tries out the motion written on the card. Then he or she draws, colors, and cuts out an illustration of someone or something using the motion. Children use books for inspiration as needed. Pictures are displayed on science bulletin board. Evaluation: Did the child's illustration show motion? Was the child's work his or her best?	New cards in research and writing. Add puzzles that show movement to games center. Collect books and poems on motion and place on special shelf in reading center.

Concept: Fast and slow as relative concepts.

Days	Objective	Group Activity	Science/Social Studies Center Activity	Other Centers
4 & 5	Children will classify objects as "fast" or "slow" in relation to another moving object (a car).	Day 4 - Read There's Motion Everywhere and discuss. - Explain new center activity and worksheets. Day 5 - Filmstrip: "Energy, Force, and Motion" Evaluation: Assess correctness of children's answers.	Classification game -- Children sort pictures into two sets, those that move faster than a car and those that are slower. Worksheets: Easy (yellow)--see Worksheet 18 in Appendix. Intermediate (red) and difficult (green)--see Worksheet 19 in Appendix Evaluation: Are children sorting pictures into correct sets? Check worksheets for accuracy.	Add Choo, Choo, The Runaway Train to the listening center. Add "Walk Along Sesame St." board game to language center.

Figure 46. Unit Plan for "Moving Around," Page 2.

Area: Science

Topic: Moving Around

Concept: Work -- work has been done when an object is moved over a distance by a push or pull.

Days	Objective	Group Activity	Science/Social Studies Center Activity	Other Centers
6, 7, & 8	Children will classify various situations as work or nonwork.	Day 6 - Read The Man Who Didn't Wash His Dishes. Discuss whether or not work is being done. - Explain new science center activity. Days 7 & 8 - Classify illustrations from Richard Scarry's What Do People Do All Day? as work or nonwork. Evaluation: Are all children able to participate? How accurate are their responses?	Board game -- "Is Work Being Done?" Children roll die and move to appropriate space on board. They decide whether or not the illustration on the space shows work being done. If the illustration shows work, the child gets to move forward an extra space. See Figure 49. Worksheets: Easy (yellow)--see Worksheet 20 in Appendix. Intermediate (red)--see Worksheet 21 in Appendix. Difficult (green)--see Worksheet 22 in Appendix. Evaluation: Are children able to classify the situations on the board game correctly? Could they complete the worksheets accurately?	Add new research and writing cards. Encourage role playing in the dramatic play center -- is your character working?

Concept: Push-pull, lift-drop are ways to move objects.

Days	Objective	Group Activity	Science/Social Studies Center Activity	Other Centers
9 & 10	Children will decide whether an object can more easily be moved by pushing, pulling, lifting, or dropping.	Day 9 - Read Push, Pull and Lift and discuss. Explain new center activity. Day 10 - Try some push-pull, lift-drop experiments in group -- have children describe what is happening, using correct terms. Evaluation: Can children apply terminology correctly?	Children perform a series of experiments that require them to move various objects from one place to another -- they decide whether to push, pull, lift, or drop the object. Worksheets: Easy (yellow)-- see Worksheet 23 in Appendix. Intermediate & difficult (red and green)-- see Worksheet 24 in Appendix. Evaluation: Observe children as they try the experiments. Evaluate their written responses.	Encourage children to verbally label what they are doing in the block center as they build -- are they lifting, dropping, pushing, pulling?

Figure 47. Unit Plan for "Moving Around," Page 3.

Area: Science

Topic: Moving Around

Concept: Simple machines help us do work/wheels reduce friction.

Days	Objective	Group Activity	Science/Social Studies Center Activity	Other Centers
11, 12, & 13	Children will predict whether sliding or rolling an object will be easier.	Day 11 - Read Berenstein Bears' Science Fair (section on simple machines & how they help us work). - Explain new center activity. Day 12 - Filmstrip: "Simple Machines" Day 13 - Use illustrations from Cars & Trucks & Things That Go. - How do wheels help things go?	Children experiment with reducing friction. First, they load a flatbed without wheels with a load of blocks and try to push it. Next, they load a flatbed truck, with wheels, with the same load of blocks and try to move it. Children decide which load moves with less effort. Worksheets: Easy (yellow)--see Worksheet 25 in Appendix. Intermediate (red)--see Worksheet 26 in Appendix. Difficult (green)--see Worksheet 27 in Appendix. Evaluation: Discuss experiment. Check worksheets.	Add new cards to research and writing centers. Add riding toys to blocks and outdoor areas.

Concept: Simple machines help us do work/inclined planes.

Days	Objective	Group Activity	Science/Social Studies Center Activity	Other Centers
14 & 15	Children will predict how the steepness of an inclined plane will affect the speed of the car being rolled down it.	Day 14 - Read Simple Machines and How We Use Them, pp. 16-23. Day 15 - Discuss inclined planes in our environment -- stairs, slides, etc. Evaluation: Can children identify inclined planes around them?	Children experiment with inclined planes of varying degrees of steepness, letting small plastic cars start at the top of each board at the same time and determining which car rolls fastest. Worksheets: Easy (yellow)--see Worksheet 28 in Appendix. Intermediate and difficult (red and green)--see Worksheet 29 in Appendix. Evaluation: Help children assess results of their experiment; check worksheets.	Add inclined planes to block center. Add manipulatives that include the use of wheels, planes, levers, etc., to games center -- Legos, etc.

Figure 48. Unit Plan for "Moving Around," Page 4.

Area: Science

Topic: Moving Around

Concept: Simple machines help us do work/levers.

Days	Objective	Group Activity	Science/Social Studies Center Activity	Other Centers
16 & 17	Children will predict whether it is easier to lift a heavy object with or without the aid of a lever.	- Read The Berenstein Bears' Science Fair, pp. 10-13 and 14-16. - Read Simple Machines and How We Use Them, pp. 9-13. - Discuss levers -- identify levers used every day with chart showing seesaws, scissors, etc. - Explain new science center activity. Evaluation: Can children identify levers and non-levers and explain how they help do work?	Experiment -- Children try lifting a heavy box with and without the aid of a lever. Children document the results of their experiments on a worksheet. Chart in science center shows several different levers (see Figure 51). Worksheets: Easy (yellow)--see Worksheet 30 in Appendix. Intermediate and difficult (red and green)--see Worksheet 31 in Appendix. Evaluation: Assess correct responses on worksheets.	Add new cards to research and writing. Point out to children that one of the outdoor stations (the seesaw) is a lever.

Concept: Simple machines help us do work/pulleys.

Days	Objective	Group Activity	Science/Social Studies Center Activity	Other Centers
18, 19, & 20	Children will make propellers turn by assembling a system of pulleys, handles, and rubber bands to do the work of turning the propellers.	- Use teacher-designed chart with various machines pictured -- escalators, dump trucks, cranes, cars, slides, seesaws, etc. Have children identify the various simple machines they have studied so far (wheels, levers, inclined planes). - Introduce the pulley as another simple machine. Evaluation: Can children correctly identify the type of machine in each illustration?	Children experiment with wheels, handles, shafts, propellers, rubber bands, and bases that can all be put together in a number of ways to form a connected set of pulleys. Worksheets: Easy (yellow)--see Worksheet 32 in Appendix. Intermediate and difficult (red and green)--see Worksheet 33 in the Appendix. Evaluation: Can children make propellers turn by correctly assembling pulleys? Are worksheets labeled correctly?	Add riding toy crane with pulley to block center. Add building materials that include pulleys -- i.e., tinker toys -- to puzzle center.

Step 11. Produce any needed materials. Make task cards and games, gather materials for experiments, and so forth.

The game "Is Work Being Done?" is shown in Figure 49. Figure 50 shows a task card for a wheels experiment, and Figure 51 shows a task card for a levers experiment. Examples of writing and research task cards shown earlier in this manual in Figures 6, 7, 8, 9, 10, and 11 are displayed in Figure 52.

Step 12. Sequence materials. Organize materials in sequence for teaching the unit. Label the backs of cards and games using small pieces of masking tape with "Days 1 & 2" or other identification written on them. Plan to store unit materials together in a cardboard box or on a shelf so they can be re-used when the unit is taught again.

Step 13. Write letter to parents outlining concepts to be taught in the unit and inviting their participation.

See Figure 53.

Step 14. Teach the unit. Evaluate the children's work and their understanding of concepts as you work with them both in large groups and in the various learning centers. Revise plans as needed to ensure the children's progress.

Blank unit planning forms appear in the Appendix (Worksheet 34, Unit Planning Form, Page 1; and Worksheet 35, Unit Planning Form, Page 2). Figures 45-48 illustrate how to complete Worksheet 34 correctly. There are no figures to illustrate how to complete Worksheet 35, which provides a format for sketching the unit bulletin board, listing books and A-V materials, and noting possible field trips and resource persons to help meet the objectives for the unit of study. Unit plans can be saved and revised from year to year.

Figure 49. Game: "Is Work Being Done?"

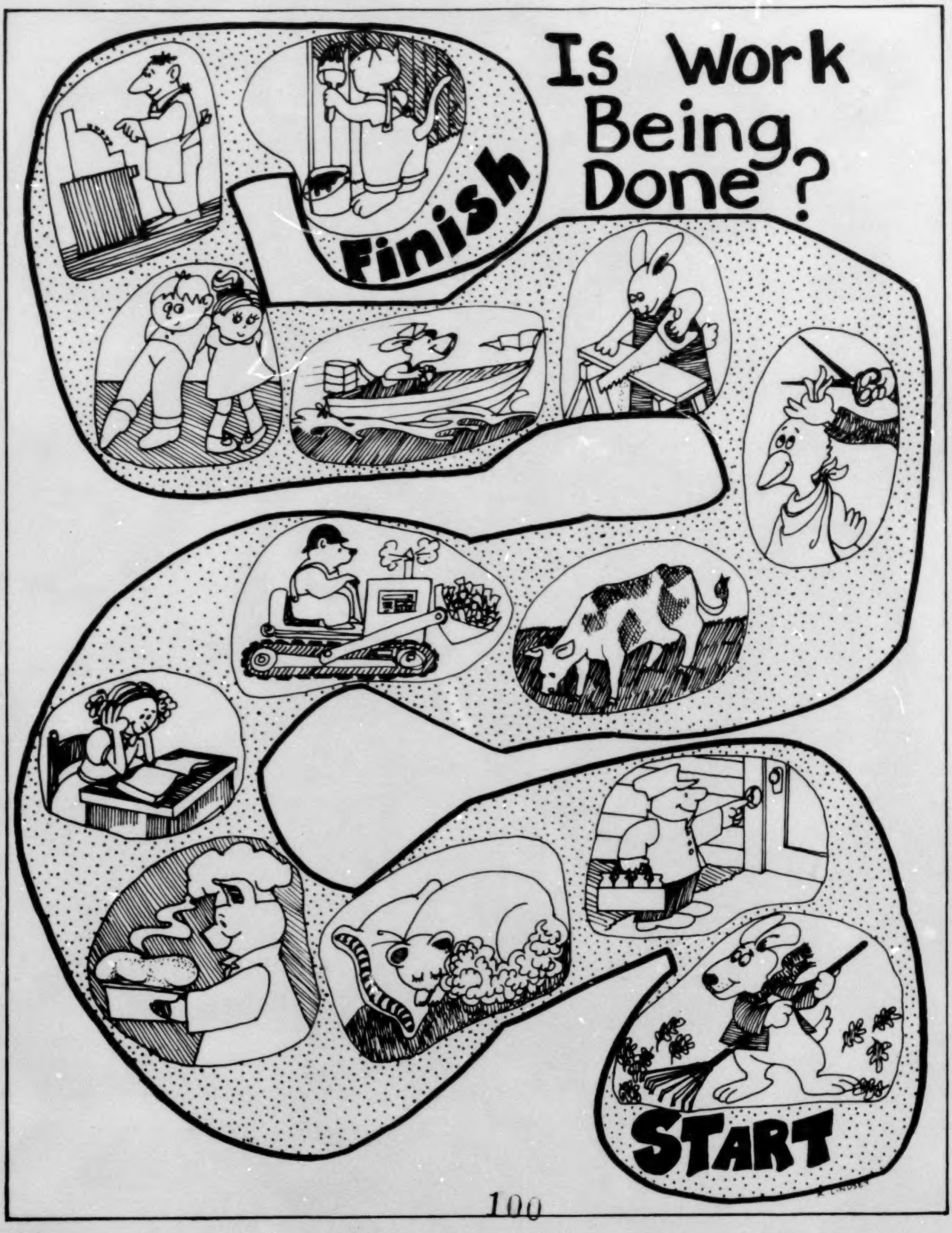
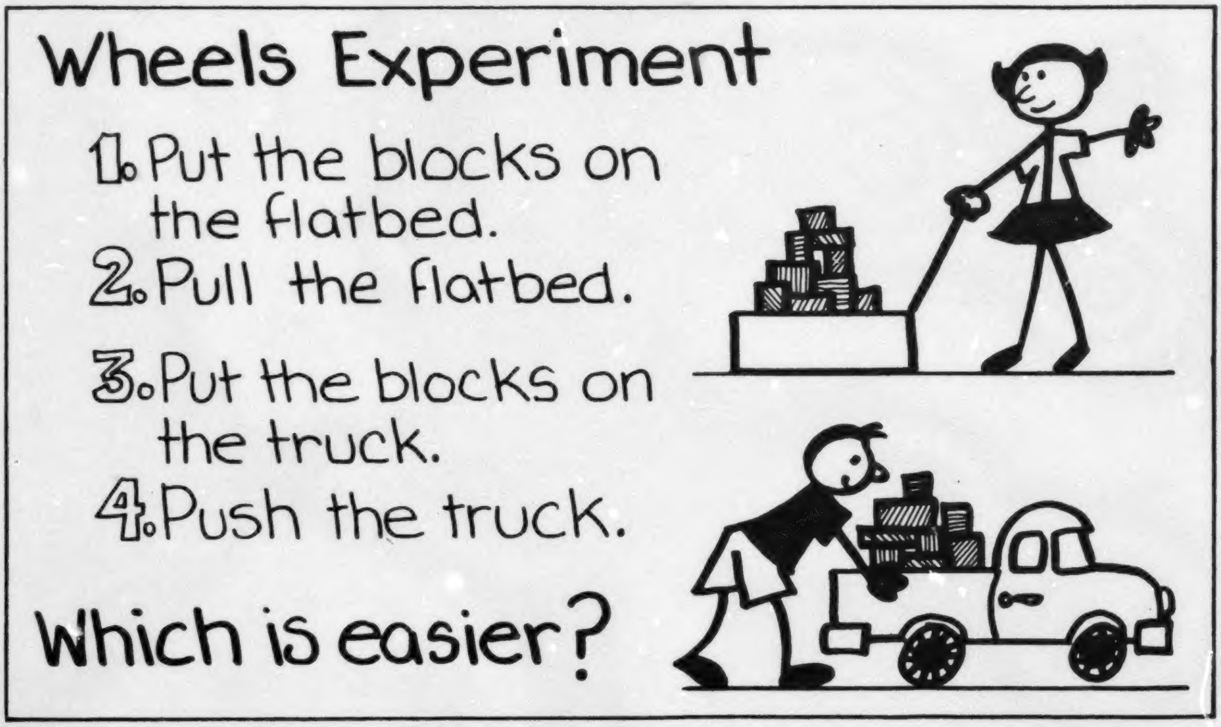

Is Work Being Done?
Finish
START
K. LINDSEY

Figure 50. Task Card for Wheels Experiment.

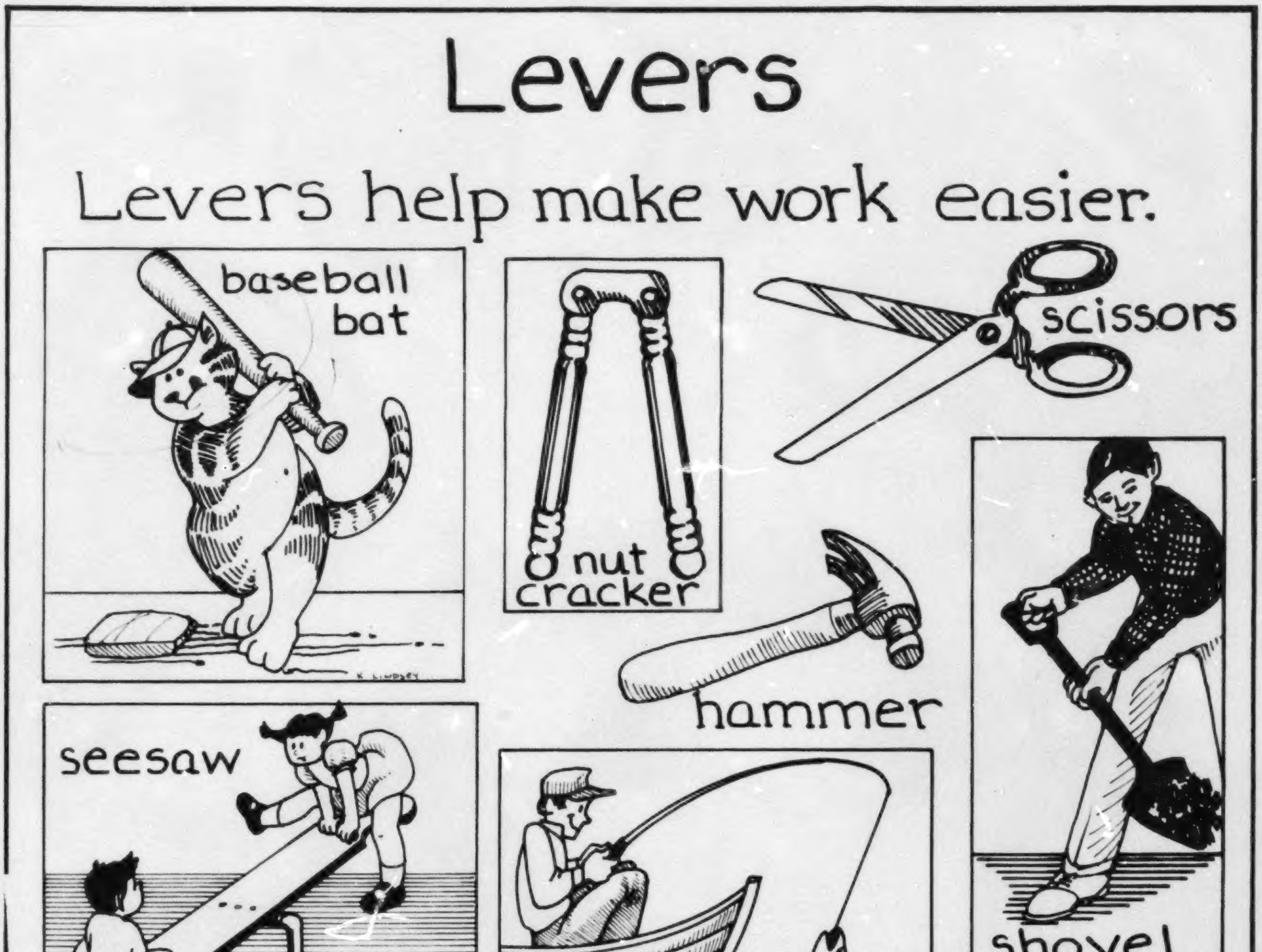


Wheels Experiment

1. Put the blocks on the flatbed.
2. Pull the flatbed.
3. Put the blocks on the truck.
4. Push the truck.

Which is easier?

Figure 51. Task Card for Levers.



Levers

Levers help make work easier.

baseball bat
nut cracker
scissors
hammer
shovel
seesaw
fishing pole

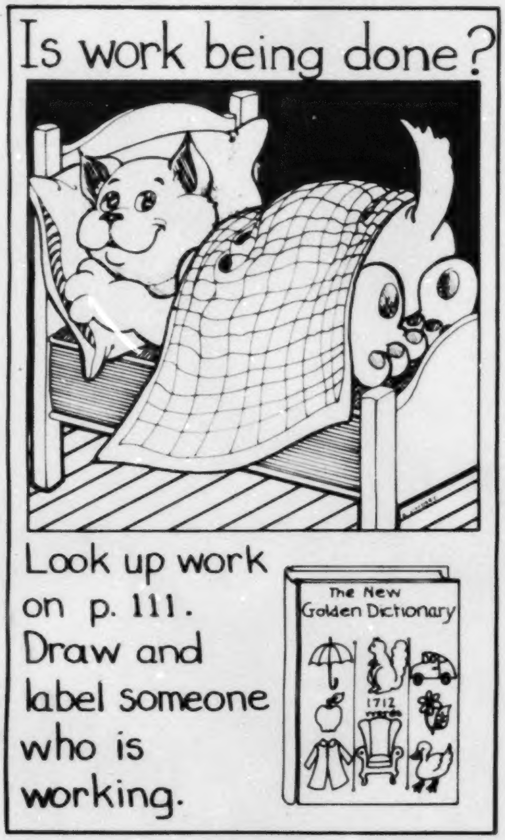
Do the experiment

Lift the box without a lever.

Lift the box using a lever.

Which is easier? Do the worksheet.

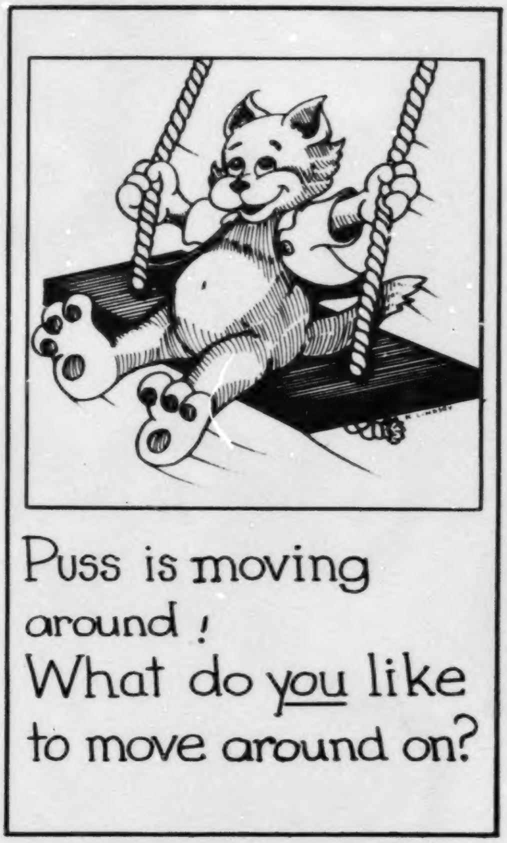
Figure 52. Writing and Research Task Cards for "Moving Around."



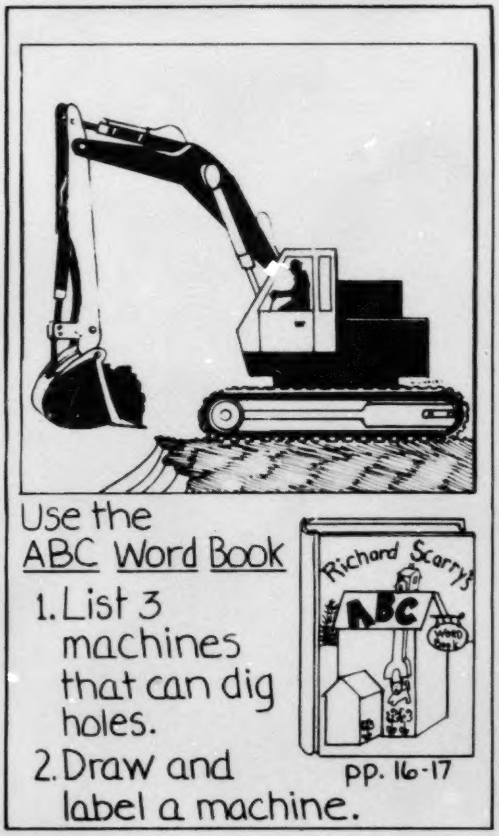
Is work being done?

Look up work on p. 111. Draw and label someone who is working.

The New Golden Dictionary
1712 words



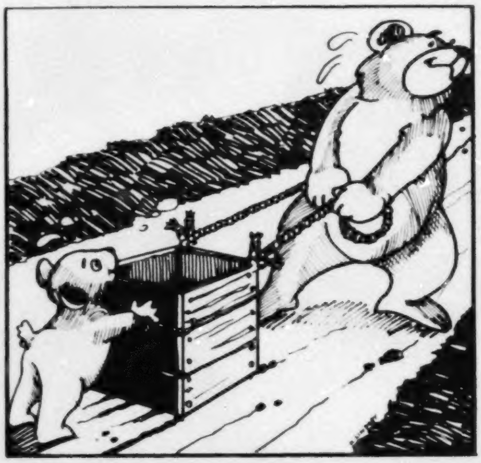
Puss is moving around! What do you like to move around on?



Use the ABC Word Book

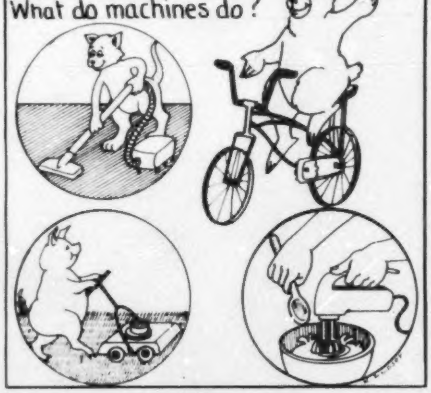
1. List 3 machines that can dig holes.
2. Draw and label a machine.

Richard Scarry's
ABC
Word Book
pp. 16-17

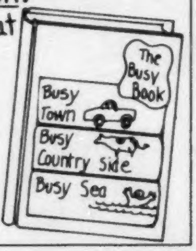


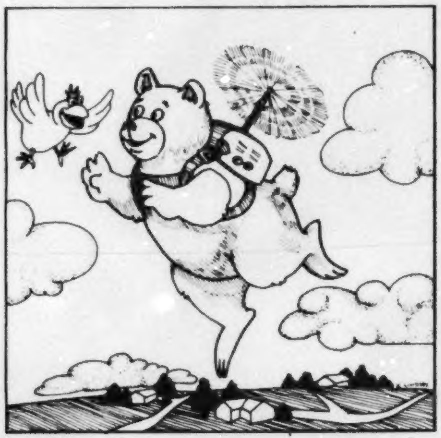
Big Bear is pulling
the box.
Little Bear
is pushing it.

Big Bear asks:
What do machines do?



Read Big Bear's story.
Use The Busy Book.
List 4 machines that
help people.
Draw and color
two of the
machines.


The Busy Book
Busy Town
Busy Country Side
Busy Sea



Little Bear has invented
a machine to take him
places! Think up a
machine that would
help you do something
you can't.

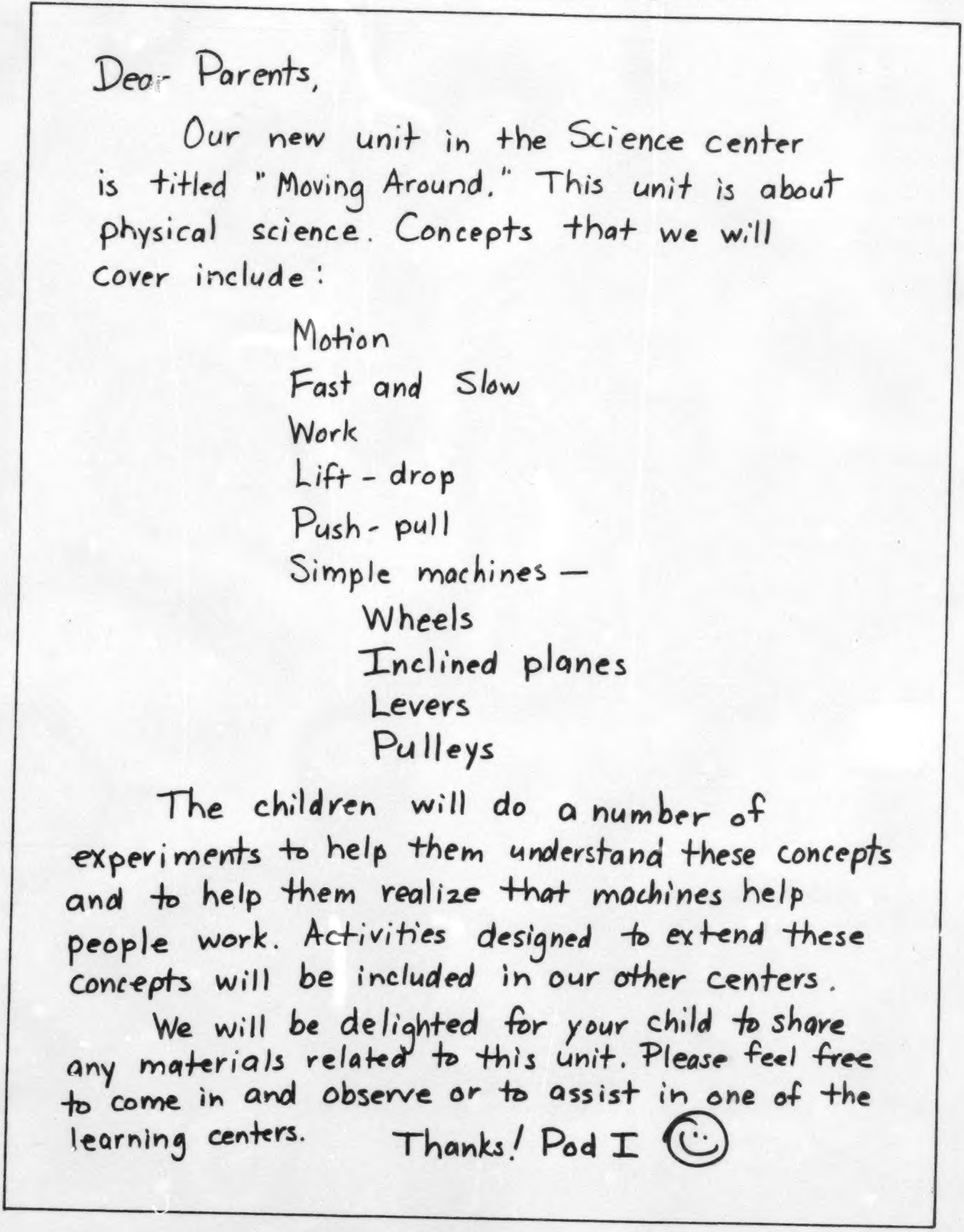


Figure 53. Parent Letter Explaining New Unit.

Dear Parents,

Our new unit in the Science center is titled "Moving Around." This unit is about physical science. Concepts that we will cover include:

- Motion
- Fast and Slow
- Work
- Lift - drop
- Push - pull
- Simple machines —
    - Wheels
    - Inclined planes
    - Levers
    - Pulleys

The children will do a number of experiments to help them understand these concepts and to help them realize that machines help people work. Activities designed to extend these concepts will be included in our other centers.

We will be delighted for your child to share any materials related to this unit. Please feel free to come in and observe or to assist in one of the learning centers.

Thanks! Pod I

Early Childhood Education:

Curriculum Organization
and Classroom Management
Filmstrip 4

Does It Work?

Two questions frequently asked by early childhood educators are, "Why use a developmental approach in teaching young children?" and "Does a developmental approach really work?" Filmstrip 4 addresses these two questions.

SCRIPT

- The Plowden Report on Children and Their Primary Schools states that "knowledge of the manner in which children develop is of prime importance, both in avoiding educationally harmful practices and in introducing effective ones." In short, it is necessary to understand child development in order to plan effective early childhood programs.
- The work of researchers such as Piaget, Gesell, and Montessori has important implications for early childhood education. Four basic guidelines have emerged from developmental research.
- First, a developmental approach focuses on the total child -- the cognitive, affective, and psychomotor growth of the child.
- Second, the curriculum must be organized around the developmental needs, interests, and learning styles of each child (it should not be organized around a particular text or time schedule).
- Third, the learning environment must encourage active participation on the part of each child, an environment where children learn through observation, exploration, and verbalization. Expression is also emphasized through writing, drawing, and movement.
- Fourth, in an early childhood classroom how the curriculum is taught is as important as what is taught. Process is as important as product for young children.
- In review, these four guidelines form the basis for early childhood classrooms that emphasize a developmental approach to learning. Teachers should focus on the total child; consider each child's interests, needs, and learning styles; encourage active participation on the part of the child; and value the learning process as much as its product.
- These curriculum organization components -- learning centers, skills groups, and units of study -- and these classroom management components -- color coding, contracts, and discipline -- are designed to implement a developmental early childhood education program.

- Does a developmental approach to early childhood learning really work? There are many ways to measure this approach.
- Typically, achievement tests such as the Prescriptive Reading Inventory and the Diagnostic Mathematics Inventory are used to measure the cognitive development of young children. However, it is equally important to assess other aspects of each child's development.
- In addition to achievement tests, other ways to assess children's learning include the use of basic skills inventories, anecdotal recordkeeping, attitude and self-concept scales, learning style inventories, and measures of teacher effectiveness. Another important way to assess learning is to observe children's classroom behavior. Let's look at observation in more detail.
- Benjamin Bloom and John Carroll were pioneers in showing the correlation between achievement and time on task. Time on task can be assessed by observing the behaviors of learners in the classroom.
- Measuring the amount of time that children are productively engaged should help us determine how well we have met our curriculum goals.
- Place, group leader, number in group, movement, academic behavior, and communication are all variables found in classrooms using a developmental approach. These six variables must be analyzed in order to determine whether or not a child is engaged in appropriate behavior.
- Since developmental classrooms have a wide variety of learning centers as well as home base work areas, place becomes a variable that needs to be analyzed in assessing behavior. Children may exhibit different degrees of appropriate behavior based on where they are in the classroom.
- Are children more productive or less productive when working directly under adult supervision? Since children may work with adults, each other, or independently during the school day, we need to analyze whether or not there is a group leader, as well as who the group leader is.
- How does group size affect appropriate behavior? Children in developmental classrooms function in large and small groups, as well as individually, so number in group becomes another important variable.
- Are children productive when they are allowed to move around the classroom? Because these children are not all on the same time schedule, they may move from one activity to another upon task completion. Movement thus becomes a variable to be measured.
- What type of cognitive activity are the children engaged in? Are children reading, solving math problems, writing stories? Appropriate behavior may vary with the type of task in which the child is engaged; therefore it is necessary to classify the type of academic behavior being observed.
- How is on-task behavior affected when children are encouraged to communicate both with the adults in the classroom and with their peers? Children interact with each other to solve a variety of problems in the learning centers in developmental classrooms. Therefore, communication becomes another variable that needs to be considered when assessing appropriate behavior.
- Children's behavior can be correlated in terms of these six variables — place, group leader, number in group, movement, academic behavior, and communication. A specific classroom behavior scale has been developed to measure these variables.
- The Wasik-Day Open and Traditional Learning Environments and Children's Classroom Behavior Instrument is designed for use in kindergarten through sixth grade.

- The Wasik-Day Instrument is divided into six variables. The first three — place, group leader, and number in group — are environmental variables.

- The last three — movement, academic behavior, and communication — are action variables.

- The last item on the scale classifies children's behavior as appropriate or inappropriate. Appropriate behavior is divided into two categories, appropriate-attending and appropriate-transition. Inappropriate behavior is also divided into two categories, nonproductive and aggressive.

- Appropriate-attending behaviors are defined as those requiring active involvement and attentiveness to work. These behaviors include independent activities, such as reading, writing, painting, and constructing, or interactive activities, such as asking for help, working with peers, or answering direct questions.

- Appropriate-transition behaviors are defined as moving from one center to another, arranging materials for work, waiting for help from a teacher, or putting away materials. Both attending and transition behaviors are classified as appropriate.

- Inappropriate-nonproductive behaviors are characterized as daydreaming, wandering, looking around, fidgeting, and the like.

- Inappropriate-aggressive behaviors include pushing, hitting, name calling, destroying property, or resisting instruction. Both nonproductive and aggressive behavior are classified as inappropriate.

- To use the Wasik-Day Instrument in the classroom, an observer collects data on one specific child for ten consecutive one-minute intervals. The observer checks an appropriate box for each variable at the end of each minute. For example, at the end of the first minute, Joel was observed in home base circle with the teacher as group leader, and the number in the group was between 16 and 25.

- In addition, Joel was sitting, his academic behavior was classified as observing an ongoing activity, the communication involved was listening, and his behavior was classified as appropriate-attending.

- Observation continued on Joel for ten consecutive one-minute intervals. The observer used a stopwatch for accuracy.

- Let's examine how data from the Wasik-Day Instrument can be analyzed. Observations were completed in a kindergarten/first-grade classroom that uses a developmental approach to learning.

- The most important finding in this classroom was the high percentage of appropriate behavior observed. Appropriate attending and transition behaviors accounted for over 91 percent of all the kindergarten and first-grade behaviors.

- An interesting pattern emerged regarding the variable, place. In the home base and study areas, instances of aggressive behavior were observed for both kindergarten and first-grade students. However, no aggressive behavior was observed in the majority of the learning centers.

- Children in this classroom spend approximately half of their time working independently without a group leader.

- Whether the children were working with a group leader or without a group leader, the overall rate of appropriate behavior remained very high.

- The children's behavior was also analyzed over an entire academic year. The greatest percentage of appropriate behavior for both kindergarten and first graders was during the winter term. Again, appropriate student behavior remains consistently high, regardless of the time of year.

- The Wasik-Day Instrument helps educators objectively measure the classroom learning environment and children's behavior.
- The Wasik-Day Instrument is one type of observation instrument that can be used to assess early childhood programs. Further assessment could include the use of achievement tests, skills inventories, anecdotal records, attitude and self-concept scales, learning style inventories, and measures of teacher effectiveness.
- For example, the children in this classroom were also given group achievement tests in reading and math. They scored as well as or better than their peers in the same school system on the Reading Inventory and the Diagnostic Mathematics Inventory over a period of several years.
- Remember that comprehensive evaluation and assessment takes into consideration all of the goals of an early childhood program, a program that focuses on the total child; one that considers the child's interests, needs, and learning style; one that encourages the child's active participation and values process as much as product.
- Does a developmental approach work? Careful observation and assessment will help you answer this question in your own particular situation.

OBJECTIVES

- Define a developmental approach to early childhood education
- List guidelines for early childhood education that are based on developmental research
- List types of measures useful in assessing children's classroom achievement
- Describe classroom environment variables that need to be assessed in order to measure children's classroom behavior effectively
- Define appropriate and inappropriate classroom behavior
- Describe the importance of measuring children's on-task behavior
- Use the Wasik-Day Open and Traditional Learning Environments and Children's Classroom Behavior Instrument
- Interpret data gathered from the Wasik-Day Instrument in a variety of ways.

RATIONALE FOR A DEVELOPMENTAL APPROACH

A statement from the Plowden Report (Plowden, 1966) on Children and Their Primary Schools provides a clear rationale for a developmental approach to early childhood education: ". . .Knowledge of the manner in which children develop is of prime importance both in avoiding educationally harmful practices and in introducing effective ones." In other words, it is necessary to understand child development in order to plan effective early childhood programs. There is a large body of developmental research available from which to draw educationally appropriate guidelines, including the work of Gesell, Piaget, Montessori, and Bloom. Four basic guidelines can be stated:

1. Early childhood education should focus on the total child. taking into consideration the cognitive, affective, and psychomotor growth of the child.
2. The curriculum must be organized around the developmental needs, interests, and learning styles of each child, rather than around a single text, curriculum guide, or time schedule.
3. The learning environment must encourage active participation on the part of each child, so that children can learn through observation, exploration, and verbalization. Self-expression should be encouraged through writing, drawing, and movement activities.
4. In an early childhood classroom how the curriculum is taught is as important as what is taught. Process is as important as product for young children.

The first three filmstrips describe techniques that are used to implement the preceding four guidelines. The classroom shown in the filmstrips has been analyzed in order to answer the question, "Does a developmental approach to early childhood education really work?"

ASSESSMENT

There are a variety of ways to assess children's classroom performance. Traditionally achievement tests have been used in assessing cognitive skills. The children in the classroom shown in the filmstrips scored as high as, or higher than, children in the same school system on achievement tests assessing reading and math skills. In Figure 54 you can compare the scores of children in the developmental classroom with the scores of other children in the same school system over a four year period.

Figure 54. Comparison of Reading and Math Achievement Test Scores (First-Grade Students).

		Prescriptive Reading Inventory				Diagnostic Math Inventory			
		Scale Score	Grade Equivalent	%ile	Stanine	Scale	Grade Equivalent	%ile	Stanine
1979	Developmental Classroom	338	2.2	79	7	353	2.8	93	8
	Others	334	2.2	76	6	349	2.6	91	8
1980	Developmental Classroom	344	2.4	82	7	357	2.9	94	8
	Others	324	1.9	67	6	339	2.3	84	7
1981	Developmental Classroom	332	2.1	74	6	356	2.9	94	8
	Others	331	2.1	73	6	348	2.6	90	8
1982	Developmental Classroom	344	2.4	82	7	360	3.0	95	8
	Others	334	2.2	76	6	352	2.8	93	8

It was considered equally important to analyze the children's behavior and accomplishments in areas other than reading and math. Skills inventories and anecdotal records were kept on each child. Objective data on time on task and whether or not children were engaged in appropriate or inappropriate classroom behavior was gathered by using a classroom observation instrument. The Wasik-Day Open and Traditional Learning Environments and Children's Classroom Behavior Instrument (see Worksheet 36) was chosen because it analyzes a number of classroom environment variables that are integral to a developmental approach to teaching young children. This instrument can easily be used by classroom teachers as well as by other early childhood educators interested in gaining objective data on children's classroom behavior.

Potential uses for this instrument include collecting data on the changes in an individual child's behavior across time; studying the relationship between a child's behavior and other classroom variables such as place, the activity in which the child is engaged, and so forth; measuring changes created by intervention programs that involve either individuals, small groups, or total classrooms; conducting research on pertinent educational issues such as the influence of different adults (teachers, parents, aides, interns) on the appropriate and inappropriate behavior of the children; the number of children in a group in relation to the occurrence of appropriate behavior; the relationship between appropriate or inappropriate behavior and different learning centers; and the impact of student teachers or graduate interns on a classroom. Another potential use is in training students of education and psychology in the study of the relationships between child behavior and classroom variables through the systematic observation of the joint occurrences of these variables.

The instrument is designed to be used in kindergarten through sixth-grade classroom settings, in either team-taught or self-contained classrooms. This instrument provides information not only on behaviors of the child, but also on the use of classroom space, the use of learning centers, the group size, and the group leader. It also allows an analysis of activities throughout the day.

The instrument has seven categories. The first three -- Place, Group Leader, and Number in Group -- are environmental variables. The next three are action variables: Movement, Academic Behavior, and Communication. The final category classifies children's behaviors as Appropriate or Inappropriate. Each category is subdivided into several comprehensive and mutually exclusive areas. Definitions of the categories and instructions on tabulating behaviors are as follows:

Time. Record hour and minute at the beginning of each 10-minute recording session. Note any changes that cause a break in a consecutive 10-minute recording. If a break occurs, go to a new 10-minute set.

Place. Prepare a map of the room and label all areas (see Figure 55).

Home Base -- Circle. Code when the child is in home base for circle activities. Examples of these activities are morning scheduling arrangements, listening to a story, or observing a flannel board activity.

Home Base -- Other. Code when the home base area is used for all other activities (for instance, when the music teacher, parent, or teacher aide uses the home base for other activity). Also code if one or more children are using the home base as a study area.

Study Area. Code when specifically designated areas are used for completing individually assigned work.

Center. Code when the child is in a learning center. Denote the center by the following code: A-Art, B-Blocks, G-Sensorimotor, H-Housekeeping, M-Math, U-Music, R-Reading, E-Research, S-Science, O-Social Studies, D-Woodworking, W-Writing, L-Listening, C-Cooking, T-Water, N-Sand, I-Outside, O-Other.

General Room Space. Includes all space not specifically designated by one of the other categories. These areas should be denoted by shaded areas on the map.

Transition. Code when a child is moving from one area to another, changing activities, gathering materials for work, or cleaning up. Child may be in one of the designated areas.

Other. Code if an area is not covered and describe the setting on the back of the code sheet.

Group Leader. Code the individual who is explicitly the leader of the ongoing activity in which the child is involved. The leader does not need to be physically near at all times. If the teacher is in a one-to-one relationship with the child, code the teacher as the leader. If children are together with no designated leader and one child becomes the leader, code group leader as peer. Codes: Teacher, Aide, Intern, Special Teacher, Parent, Peer, Other, and None.

Number in Group. Code the number of children in the group in which the child is involved. For example, count all children sitting on the floor in a common area listening to a story. If the child is sitting at a table with other children, count the total number of children at that table. Do not include adults.

Movement.

Sitting. Code sitting behavior regardless of whether the child is sitting on a chair, floor, table, or other structure.

Standing. Code standing regardless of where the child is standing.

Moving. Code when locomotion is involved. Do not code fidgeting as moving.

Lying Down. Code when the child is in a prone position, regardless of the classroom activity.

Academic Behavior.

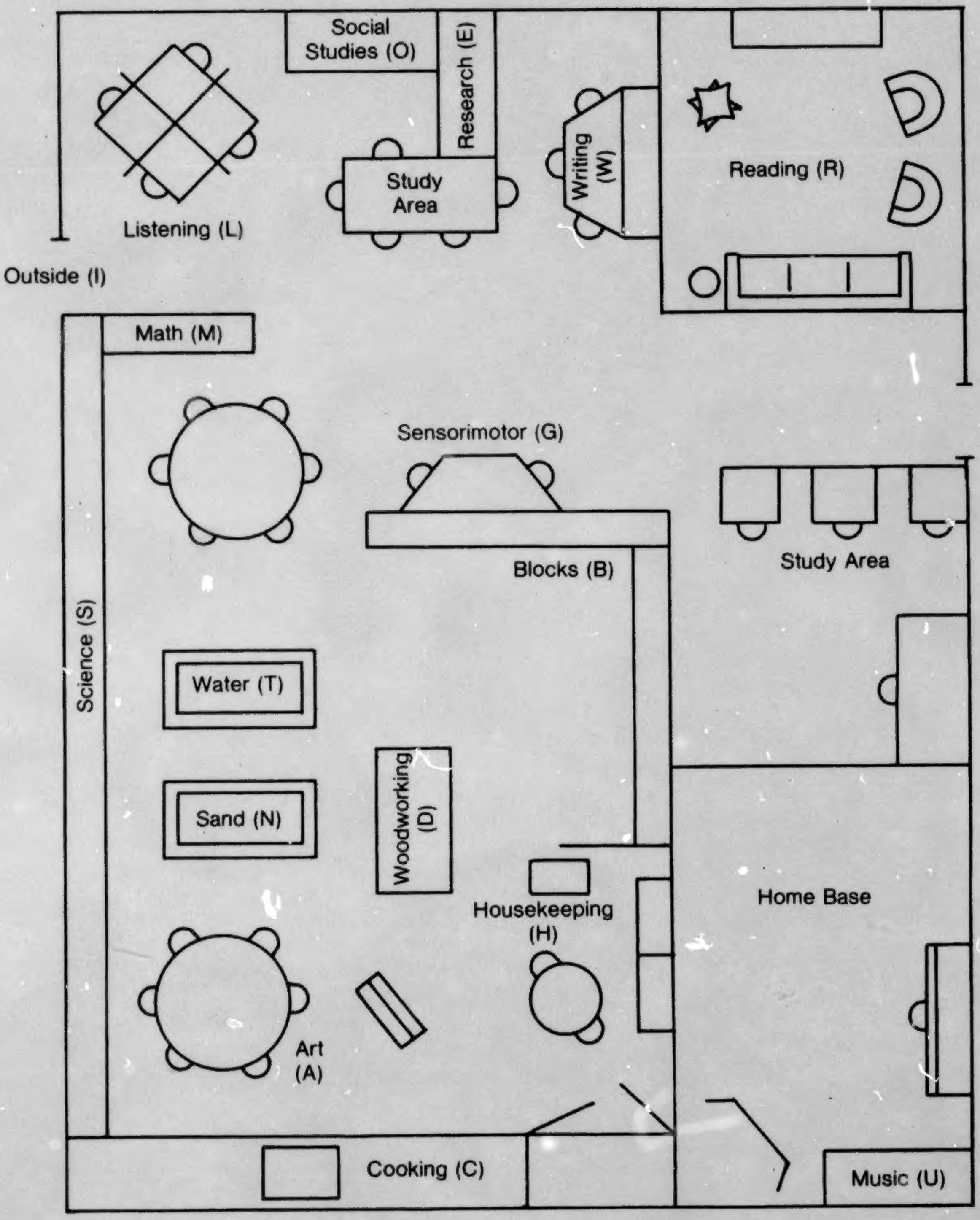
Reading. Code when the child has all appearances of reading (looking at pages in books, periodically turning pages). Book must have words.

Writing. Code when the child is using a pencil, crayon, or other writing instrument to print or write letters or words. If the child is reading and writing, code as reading when no writing is being done.

Math. Code if the activity is math and the child is involved with the activity. Code even if the child is reading or writing math problems.

Observing Ongoing Activity. Code when an activity is being explained or demonstrated or when some topic is being presented and the children are supposed to be listening. Activity must be appropriate for the classroom.

Figure 55. Sample of a Classroom Map for Coding Purposes.


Social Studies (O)
Research (E)
Listening (L)
Study Area
Writing (W)
Reading (R)
Outside (I)
Math (M)
Sensorimotor (G)
Blocks (B)
Study Area
Science (S)
Water (T)
Sand (N)
Woodworking (D)
Housekeeping (H)
Home Base
Art (A)
Cooking (C)
Music (U)

Other. All other academic or appropriate classroom behavior not specified above, including art, music, science, social studies, and clean-up time.

Communication.

Listening. Code as listening when the child appears to be attentive to the person who is speaking. Subcategories are teacher, aide, intern, peer, or other.

Speaking. Code the individual to whom the target child is speaking. If the child is talking out loud or singing and has not directed this toward anyone, code as the subcategory self. The subcategories are teacher, aide, intern, peer, self, or other.

None. Code when the child is neither listening nor speaking.

Appropriateness of Behavior.

Appropriate-Attending. Code the time a child is behaving appropriately and his overt behavior suggests he is actively involved in and paying attention to his work. This includes productive independent activity such as reading, writing, painting, constructing, or working with a teaching device; assertive work such as asking for help or support; contributing information and ideas; cooperative behavior such as talking to or working with peers; and appropriate dependent activity such as answering direct questions and carrying out requests.

Appropriate-Transition. Examples of a child's behavior that are classified as appropriate but not as attending include arranging materials for work, waiting for help from a teacher, sitting quietly in a chair but showing no overt productive behavior, and sitting while a teacher presents material but not responding to it.

Inappropriate-Nonproductive or Inappropriate Time or Place. Code as nonproductive behavior looking around and engaging in repetitive physical movements such as rocking in a chair, swaying back and forth, fidgeting, or aimless wandering. For inappropriate for time and place, code all appropriate behaviors performed outside the time limits or in an inappropriate setting. Examples are continuing with one activity when it is time for another to begin, not being in the appropriate place while carrying out work, speaking out of turn, and interrupting another person.

Inappropriate-Aggressive or Resistive, Attention Getting. For aggressive or resistive behaviors, code direct attack on a child or teacher; grabbing, pushing, hitting, kicking, name calling, destroying property; and physically or verbally resisting instructions or directions. For attention getting, code activities which result in and are being maintained by social attention. Examples would be bothering or annoying others, criticizing, making noise, loud talking, clowning, excessive hand raising, temper tantrums, and excessive requests for assistance.

A sample of a completed Wasik-Day Instrument is shown in Figure 56. Space for one set of ten observation periods is available on each sheet. The instrument requires that an observation be recorded at regular intervals under each of the main categories, thus providing short consecutive time samples. Observation at 30-second intervals is possible, but reliability measures and tests of the instrument have been performed only on data collected at one-minute intervals, so only this time interval will be discussed. The observer should attend to the ongoing events throughout the one-minute time period, make the necessary coding adjustments, and then record the behaviors. When observing across a long period of time, observers should take breaks after every 20 minutes of recording. Other nonrecording times occur during outside play, lunch, rest time, and other occasions when children are out of the classroom.

Figure 56. Sample of a Completed Wasik-Day Open and Traditional Learning Environments and Children's Classroom Behavior Instrument.

Page No: 1
Date: 5/3/82
Time: 8:32
CODING SHEET: Child: Joel
ID No: 14
Grade: K
School: Seawell
Teacher: Drake
Observer: Kelley

PLACE										
Home Base-Circle	✓	✓	✓	✓	✓					
Home Base-Other						✓	✓	✓		
Study Area										
Center									u	u
General Room Space										
Transition										
Other										
GROUP LEADER										
Teacher	✓	✓	✓	✓	✓					
Aide										
Intern										
Special Teacher						✓	✓	✓	✓	✓
Parent										
Peer										
Other										
None										
NUMBER IN GROUP										
1										
2										
3-8										
9-15										
16-25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
26+										
MOVEMENT										
Sitting	✓	✓		✓	✓	✓	✓	✓		
Standing			✓							✓
Moving									✓	
Lying Down										
ACADEMIC BEHAVIOR										
Reading										
Writing										
Math										
Obs. Ongoing Act	✓	✓		✓	✓					
Other			✓			✓	✓	✓	✓	✓
COMMUNICATION										
Listening										
Teacher	✓						✓			✓
Aide										
Intern										
Peer		✓		✓	✓					
Group										
Other										
Speaking										
Teacher										
Aide										
Intern										
Peer								✓		
Self										
Other			✓							
None						✓			✓	
BEHAVIOR										
Appro-Attending	✓	✓	✓	✓	✓		✓			✓
Appro-Transition						✓			✓	
Inappro-Nonprod/Time & Place								✓		
Inappro-Agg/Resist										

In Figure 56, coding began when the child was in home base for circle activities, with the teacher leading the group. During the first ten minutes, the child was primarily sitting in a large group, observing the ongoing activity in the home base group. During this time he spoke to both the teacher and to a peer, and his overall behavior was coded as appropriate. During the next five minutes the child began to make the transition to the music center. The music teacher took over as group leader in the home base area, and shortly afterwards the child moved to the music center, remaining in a large group setting. The child attended appropriately during the first five intervals and then began a transition for the music activities. One can see an instance of inappropriate speech with a peer during this time.

To use this instrument, observers should be trained in the use of a basic time sampling procedure using the coding sheet, pencils, and stopwatches. For individuals familiar with classroom settings, six to eight hours has been sufficient training time. Observers should first learn the categories in the instrument and the layout of the room from a map drawn for coding purposes. They should then practice coding data both from videotapes of children in classroom settings and from observations in actual classroom settings. Then estimates of observer agreement should be obtained. Observers should familiarize themselves with a new classroom for at least 30 minutes prior to collecting data.

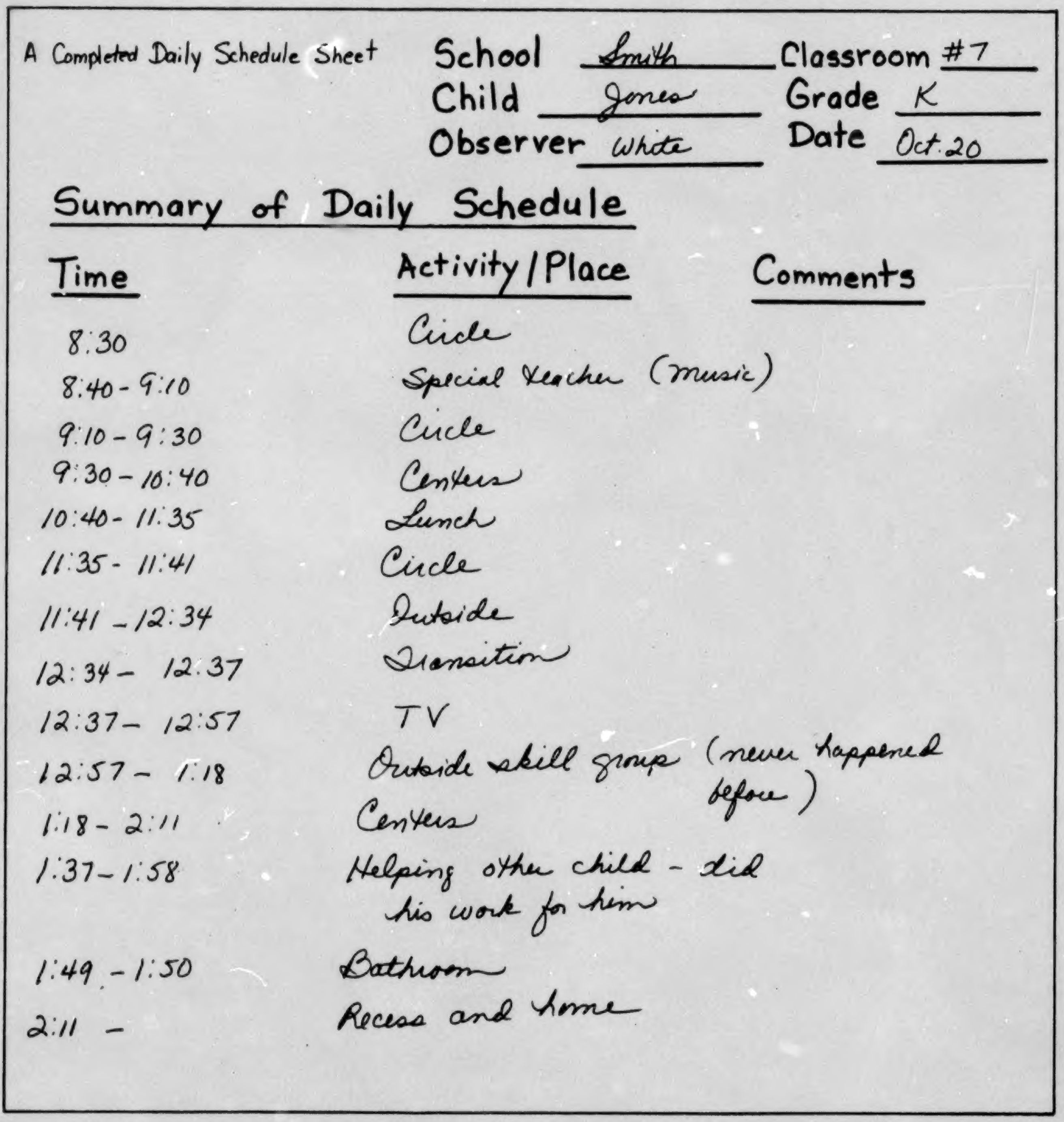
In addition to making observations on the instrument, the observers should fill out the Daily Schedule Sheet. This sheet provides important information on time, activity, and place that may be necessary to interpret the data from the Wasik-Day Instrument. Figure 57 is an example of a completed Daily Schedule Sheet.

Before coding for research or evaluation purposes, an observer should have previously obtained overall agreement with a second observer of 85 percent or higher on ratings of five different children. Estimates of total instrument observer agreement should be obtained by collecting ten minutes of data for each comparison. Agreements across all categories for ten minutes should be determined and the following formula used: Observer Agreement = Agreements ÷ (the total number of Agreements + Disagreements) X 100. For the seven categories, ten minutes of data collected at one-minute intervals results in 70 possible occasions for agreement or disagreement.

Next, percents of agreement should be determined for each specific category by checking agreements across the ten minutes. The possible number of agreements and disagreements is ten (for ten minutes of data collected on a specific category at one-minute intervals). Training should continue until observer agreement on categories is 90 percent or higher.

In validating the use of this instrument, data were collected on 38 children (19 first graders and 19 kingergarten children) in an open classroom at an elementary school in Chapel Hill, North Carolina. The classroom had two teachers and two aides in a

Figure 57. Sample of a Completed Daily Schedule.



A Completed Daily Schedule Sheet

School Smith Classroom #7
Child Jones Grade K
Observer White Date Oct. 20

Summary of Daily Schedule

Time	Activity/Place	Comments
8:30	Circle	
8:40 - 9:10	Special teacher (music)	
9:10 - 9:30	Circle	
9:30 - 10:40	Centers	
10:40 - 11:35	Lunch	
11:35 - 11:41	Circle	
11:41 - 12:34	Outside	
12:34 - 12:37	Transition	
12:37 - 12:57	TV	
12:57 - 1:18	Outside skill group	(never happened before)
1:18 - 2:11	Centers	
1:37 - 1:58	Helping other child - did his work for him	
1:49 - 1:50	Bathroom	
2:11 -	Recess and home	

team-teaching arrangement.

Data were collected on each child for ten minutes a day across four days. Four observers coded the data. Children were randomly assigned to observers and to the time of day for data collection. For each ten-minute sample of behavior, 70 judgments were made concerning the child being observed. For the four days of data collection, 280 judgments were made concerning each child.

To demonstrate the type of interpretations possible from these data, crosstabulations in frequencies and percents were obtained. In Figure 58, crosstabluations are presented to show the relationships between Academic Behavior and Group Leader. Figure 58 shows that of the total observations, 1.2 percent of time was spent in reading with the teacher as group leader, 1.2 percent with the aide, 4.8 percent with the intern, and 3.8 percent when no one was identified as group leader. The total amount of time spent in reading was 11 percent of the observed time under various group leader arrangements.

Figure 58. Crosstabulations of Frequencies and Percents of Academic Behavior and Group Leader.

		Group Leader						
		Teacher	Aide	Intern	Special Teacher	Peer	None	Total
Academic Behavior								Freq/ Row%
Reading	Freq	14	13	54	0	0	43	124
	Cell%	1.2	1.2	4.8	0.	0.	3.8	11.
Writing	Freq	5	2	5	0	0	56	68
	Cell%	0.4	0.2	0.4	0.	0.	5.	6.
Math	Freq	19	0	18	0	0	22	59
	Cell%	1.7	0.	1.6	0.	0.	1.9	5.2
Observing	Freq	28	3	36	0	0	24	91
	Cell%	2.5	0.3	3.2	0.	0.	2.1	8.1
Other	Freq	129	122	134	48	1	347	781
	Cell%	11.4	10.8	11.9	4.2	0.1	30.7	69.1
Total	Freq	195	140	247	48	1	492	1123
	Cell%	17.3	12.4	21.9	4.2	0.1	44.2	99.4*

*Missing data = 1.6% of total

Additional data analysis can be conducted. For example, of the time spent in reading, which was 11 percent of total academic time, 11.3 percent (14 out of 124) was when the teacher was group leader, 10.5 percent with the aide, 43.5 percent with the student intern, and 34.7 percent when no one was identified as a group leader; no time was spent with the categories of special teacher and peer. Each of the other row categories can be compared in a similar manner. Additionally, comparisons can be made for the amount of time spent in each Academic Behavior category separately for each group leader. Thus, looking at Academic Behaviors when the teacher is the group leader, 7.2 percent (14 out of 195) of the time is spent in reading, 2.6 percent in writing, 9.7 percent in math, 14.4 percent in observing ongoing activity, and 66.2 percent in other activities. Similar comparisons can be made for each of the other Group Leader headings.

Although the authors were primarily interested in the three Academic Behaviors of reading, mathematics, and writing, the high percentage of time coded for "other" under Academic Behavior in Figure 58 indicates the need to divide this category into additional headings to better define the academic classroom activities of the children.

The relationship for all the other categories in the Wasik-Day Instrument can be looked at by obtaining frequencies and percents of crosstabulations as was done above. For example, the amount of time spent in different classroom areas, noted as Place, can be compared to the amount of Academic Behavior demonstrated in each of these areas. Likewise, Place can be compared to the amount of time in Appropriate-Inappropriate Behavior.

STUDIES USING THE WASIK-DAY OPEN AND TRADITIONAL LEARNING ENVIRONMENTS AND CHILDREN'S CLASSROOM BEHAVIOR INSTRUMENT

Several studies were designed to explore the behavior patterns of children in the developmental program presented in this series of filmstrips.

Three specific questions were asked: 1) What are the patterns of appropriate and inappropriate behavior across the academic year? 2) How do appropriate and inappropriate behavior patterns vary as a function of the use of classroom space, especially learning centers? and 3) How do appropriate behaviors vary as a function of group leader?

Data for these studies were collected from a multi-age classroom including both kindergarten and first-grade students at Seawell Elementary School in Chapel Hill, North Carolina, from the fall of 1978 through the spring of 1980. During the study, student behavior was observed, tracked, and recorded using the Wasik-Day Instrument. At intervals of one minute, student behavior was observed and then recorded as being either 1) Appropriate-Attending, 2) Appropriate-Transition, 3) Inappropriate-Nonproductive, or 4) Inappropriate-Aggressive/Resistive.

Because observations were taken repeatedly over a period of time, it was possible to obtain data on how patterns of student behavior might vary or remain constant during the course of an academic year. Figure 59 shows recorded levels of student behavior obtained during fall, winter, and spring of the 1978-79 school year.

Figure 59. Kindergarten and First-Grade Behavior Across the Academic Year.

	Kindergarten			
	Fall 78	Win 79	Spring 79	Mean
Attending	65.00	69.52	62.87	68.45
Transition	25.89	24.45	22.67	22.55
Nonproductive	8.23	5.87	13.66	8.19
Aggressive/ Resistive	0.88	0.16	0.00	0.32
	First Grade			
	Fall 78	Win 79	Spring 79	Mean
Attending	65.70	74.36	70.56	69.62
Transition	28.76	19.16	18.39	22.03
Nonproductive	5.36	6.13	10.16	8.03
Aggressive/ Resistive	0.17	0.34	0.89	0.29

It was noted that the greatest percentage of Attending behavior for both kindergarten and first-grade students occurred during the winter term, and the greatest percentage of Nonproductive (wandering, daydreaming) behavior for both groups occurred in the spring. The Transition behaviors for both kindergarten and first grade decreased steadily throughout the school year. Aggressive/Resistive behavior among kindergarten students decreased throughout the year, while Aggressive/Resistive behavior among first-grade students slightly increased. The overall percentage of appropriate student behavior remained consistently high.

The combined data from the observations comparing student behavior with classroom locations and learning centers for the kindergarten and first-grade students are displayed in Figures 60 and 61.

Figure 60. Combined Data for Behavior vs. Place in Kindergarten.

	Appropriate		Inappropriate	
	Attending	Transition	Nonproductive	Aggressive/ Resistive
Home Base, Circle	80.90	13.07	4.52	1.01
Home Base, Other	73.07	21.58	4.85	0.50
Study Area	65.72	22.92	10.95	0.41
General Room	41.01	47.00	11.52	0.46
Centers				
Reading	48.76	34.71	16.53	0.00
Writing	66.19	24.46	9.35	0.00
Math	69.72	16.73	13.55	0.00
Listening	86.25	6.25	7.50	0.00
Research	65.03	31.90	3.07	0.00
Art	72.29	19.11	8.60	0.00
Sensorimotor	85.40	12.41	1.46	0.73
Housekeeping	80.00	9.57	10.43	0.00
Blocks	72.55	17.65	9.80	0.00
Total Percent	69.76	21.34	8.63	0.24

The most important finding was the high percentage of appropriate behavior observed. Attending behaviors and Transition behaviors, when considered collectively as appropriate, accounted for 91.13 percent of all kindergarten behavior and 91.96 percent of all first-grade behavior. This means that for both kindergarten and first-grade children, less than one-tenth of the students' time was spent in inappropriate activity. Also, in both classes less than 1 percent of all behavior was characterized as Aggressive/Resistive. In first grade, the least productive place in the classroom was shown to be the study area where students were assigned to complete independent seatwork.

Figure 61. Combined Data for Behavior vs. Place in First Grade.

	Appropriate		Inappropriate	
	Attending	Transition	Nonproductive	Aggressive/ Resistive
Home Base, Circle	79.84	18.52	1.23	0.41
Home Base, Other	71.49	24.05	4.04	0.42
Study Area	67.69	18.12	14.08	0.11
General Room	61.92	31.54	6.15	0.38
Centers				
Reading	68.35	18.71	12.59	0.36
Writing	73.86	15.03	11.11	0.00
Math	75.62	18.41	5.47	0.50
Listening	69.44	19.44	11.11	0.00
Research	72.79	22.79	4.41	0.00
Art	68.00	21.50	10.50	0.00
Sensorimotor	89.86	4.35	5.80	0.00
Housekeeping	86.96	8.70	4.35	0.00
Science	69.63	18.85	9.42	1.57
Total Percent	73.50	18.46	7.73	0.29

The combined data comparing kindergarten and first-grade student behavior with group leaders (teacher, aide, intern, special teacher, parent) is shown in Figures 62 and 63.

In examining these two tables, several interesting observations can be made. The kindergarten students had the highest percentage of appropriate behavior while under the supervision of a parent, while the first-grade students had the highest percentage of appropriate behavior when under the supervision of a special teacher (music, art, P.E.). The kindergarten students had the smallest percentage of appropriate behavior when working independently, while the first-grade students had the smallest percentage of appropriate behavior while under the supervision of a parent. Throughout the study, no

Figure 62. Combined Data for Behavior vs. Group Leader in Kindergarten.

	Appropriate		Inappropriate	
	Attending	Transition	Nonproductive	Aggressive/ Resistive
Teacher	71.04	23.91	4.21	0.67
Aide	73.69	20.18	4.48	0.30
Intern	70.29	23.32	6.23	0.16
Special Teacher	90.00	0.00	10.00	0.00
Parent	95.45	4.55	0.00	0.00
No Leader	65.81	23.01	10.85	0.30
Total	77.71	15.83	5.96	0.24

Kindergarten students spent 54.97 percent of their time without direct adult supervision.

Figure 63. Combined Data for Behavior vs. Group Leader in First Grade.

	Appropriate		Inappropriate	
	Attending	Transition	Nonproductive	Aggressive/ Resistive
Teacher	75.18	22.58	2.13	0.12
Aide	69.06	25.78	4.71	0.45
Intern	74.32	19.74	5.62	0.32
Special Teacher	90.79	9.21	0.00	0.00
Parent	76.92	7.69	15.38	0.00
No Leader	65.76	22.28	11.59	0.33
Total	75.34	17.88	6.57	0.20

First-grade students spent 54.50 percent of their time without direct adult supervision.

instances of Aggressive/Resistive behavior were recorded for either kindergarten or first-grade students while under the supervision of either a parent or a special teacher.

In interpreting these data, one must keep in mind the fact that children spend different amounts of time with these adults. In summary, kindergarten children were recorded as spending the following percents of time with adults as leaders: teacher as leader, 13.78 percent; aide, 15.52 percent; intern, 14.42 percent; special teacher and parent were both less than 1 percent. The leaders for first-grade children are as follows: teacher, 19.09 percent; aide, 10.07 percent; intern, 14.06 percent; special teacher, 1.72 percent; and parent, less than 1 percent.

It should be noted that both the kindergarten and first-grade students spent over half of their classroom time (kindergarten, 54.97 percent; first grade, 54.50 percent) working independently without direct adult supervision. For both classes, the total amount of inappropriate activity while working independently was below 7 percent, and the total amount of Aggressive/Resistive behavior was less than 1 percent. In Figures 61, 62, and 63 the overall rate of appropriate behavior is very high.

In conclusion, when looking at student behavior across the academic year in the various classroom areas and with different group leaders, one sees a pattern of activity (see Figure 64).

Figure 64. Overall Behavior by Categories.

	Attending	Transition	Nonproductive	Aggressive
First Grade	69.62	22.03	8.03	0.29
Kindergarten	68.45	22.5	8.19	0.32

The kindergarten and first-grade students generally spent about two-thirds of their time attending to instruction or learning activities. A little less than one-quarter of their time was spent in transitional activities. Combined, these figures show that the students spent 91 percent of their time engaged in appropriate classroom behaviors. Consequently, these students were observed as being off-task only 9 percent of the time. These findings are particularly interesting in view of the fact that these kindergarten and first-grade students were working independently without direct adult supervision over half of the time they were in the classroom. Additional research on other variables on the Wasik-Day Instrument will add additional information on the developmental classroom as shown in these filmstrips. These variables include number in group (for instance, the relationship between appropriate and inappropriate behavior in different size groups, and the amount of time spent in different size groups). In addition, the amount of movement in the classroom can be observed in relation to other variables, such as academic behavior (reading, writing, math) and the amount of appropriate or inappropriate behavior. The amount of communication in the classroom could be analyzed in relation to place, group leader, number in group, academic behavior, and so forth. Crosstabulations can be used to analyze any number of variables on the instrument in order to answer questions raised regarding early childhood learning environments.

Early Childhood Education:

Curriculum Organization
and Classroom Management

Appendix

LIST OF WORKSHEETS

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Worksheet 7. Mathematics Skills Checklist, Page 2.

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Worksheet 9. Readiness Skills Checklist.

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Worksheet 20. Easy Follow-Up Worksheet for "Is Work Being Done?"

Worksheet 21. Intermediate Follow-Up Worksheet for "Is Work Being Done?"

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Worksheet 1. Weekly Schedule for Contract Groups.

Weekly Schedule for Contract Groups

Contract Groups: ______ ______ ______ ______

Number in group: ______ ______ ______ ______

Centers	Monday	Tuesday	Wednesday	Thursday	Friday

Reading Log/Daily Record of Contract Work

Date:	Monday		Tuesday		Wednesday		Thursday		Friday	
Names:	Skills	Contract	Skills	Contract	Skills	Contract	Skills	Contract	Skills	Contract

Worksheet 2. Reading Log.

Worksheet 3. Weekly Planning Sheet.

Weekly Planning Sheet

Group:

Day	Reading Group	Math Group

Worksheet 4. Language Arts Skills Checklist, Page 1.

CHAPEL HILL-CARRBORO CITY SCHOOLS
Language Arts Skills
K-3

Name ______________________________ School ______________________

Skills listed below are on different levels of difficulty and will be taught at different times during the K-3 period.

Teacher					
Year					
1. Knows own name					
2. Can reproduce images (eye-hand coordination)					
3. Top-bottom, left-right orientation					
4. Categorizes					
5. Recognizes objects and names orally					
6. Recognizes pictures (can name and sequence)					
7. Recognizes and names the basic colors					
8. Sees differences and likenesses in words, pictures, and letters					
9. Recognizes letters of the alphabet Lower case _____ Upper case ______					
10. Consonant sounds: b c d f g h j k l m n p q r s t v w x y z					
11. Applies consonant sounds to: a. initial position in words					
b. final position in words					
c. medial position in words					
12. Two-letter blends: sh st bl pl tr fr wh th ch fl cl gl sp sm sn sw tw					
13. Three-letter blends: str sch thr spr spl chr					
14. Ending consonant blends: ld nd ft st lt ng nt mp					
15. Consonant diagraphs: wh sh th ch ck ng gh ph					
16. Rhyming words					
17. Compound words from basic vocabulary					
18. Contractions from basic vocabulary					
19. Root words					
20. Endings: ed s es ing er est ly					
21. Vowels a. short a, e, i, o, u					
b. long a, e, i, o, u					
22. Syllabication a. rules					
b. application of rules					
c. understands use of primary accent mark					

Worksheet 5. Language Arts Skills Checklist, Page 2.

23. Dictionary skills					
a. alphabet in order					
b. alphabetize words to first letter					
c. alphabetize words to second letter					
d. locate words in a dictionary					
24. Antonyms, synonyms, homonyms					
a. identification					
b. use					
25. Reading comprehension					
a. follows printed directions					
b. sequence					
c. main idea					
d. can locate information in a story					
e. can draw logical conclusions					
f. classify items					
g. use of table of contents					
h. use of index					
i. can determine source for obtaining information (dictionary, encyclopedia, index, glossary, and so forth)					
26. Oral reading					
a. reads fluently					
b. reads with expression					
27. Writing					
a. correct formation of letters					
b. writes legibly and neatly					
28. Capitalization					
a. proper names					
b. first word in sentence					
c. first word in quotation marks					
29. Punctuation					
a. period					
b. question mark					
c. exclamation mark					
d. quotation marks					
30. Parts of speech					
a. nouns					
b. verbs					
c. adjectives					
d. pronouns					
31. Spelling — practical application					
32. Listening					
a. follows oral directions					
b. sequence					
c. main idea					
33. Dolch Basic Sight Vocabulary					

1st year Number ____ ____ ____

Date ____ ____ ____

2nd year Number ____ ____ ____

Date ____ ____ ____

3rd year Number ____ ____ ____

Date ____ ____ ____

4th year Number ____ ____ ____

Date ____ ____ ____

Worksheet 6. Mathematics Skills Checklist, Page 1.

CHAPEL HILL-CARRBORO CITY SCHOOLS
Mathematics Skills
K-3

Name ______________________ School ______________________

Skills listed below are on different levels of difficulty and will be taught at different times during the K-3 period.

Teacher					
Year					
SET CONCEPTS					
1. Recognizes sets					
2. One-to-one matching					
3. Equivalent sets					
SEQUENCES					
1. Pattern recognition					
2. Counts and knows sequence of numerals 1-10					
3. Counts to 100 by 1s					
4. Counts by 2s, 5s, 10s					
5. Less than, more than					
6. Knows numbers before and after					
7. Odd and even numbers					
GEOMETRY					
1. Understands spatial relationships					
2. Geometric shapes					
3. Notes comparisons, sizes, shapes, forms					
NOTATION					
1. Formation of numerals 1-10					
2. Number words (one, two, and so forth)					
3. Symbols					

plus + _____ minus - _____

equals = _____ placeholder ■ _____

greater than, less than > < ________

multiply X ______ divide ÷ ⟌ _______

cents ¢ _____ dollars $ ______

decimal . ______

Worksheet 7. Mathematics Skills Checklist, Page 2.

OPERATIONS

Addition
- 1. of numbers 1-5
- 2. of numbers 6-10
- 3. of numbers 1-20
- 4. of three numbers
- 5. of two- and three-digit-numbers
- 6. with regrouping

Subtraction
- 7. of numbers 1-5
- 8. of number 6-10
- 9. of numbers 10-20
- 10. of two- and three-digit-numbers
- 11. with regrouping

Multiplication
- 12. facts through 5
- 13. facts through 9
- 14. facts of two- and three-digit-numbers
- 15. facts with regrouping

Division
- 16. division of sets
- 17. division as the inverse of multiplication
- 18. division of two- and three-place-numbers
- 19. using a remainder

RATIONAL NUMBERS

1. Understands fractional concepts
2. Can use fractions in computation

PLACE VALUE

1. Identifies
   - a. ones
   - b. tens
   - c. hundreds

2. Uses place value in computation

Worksheet 8. Mathematics Skills Checklist, Page 3.

MEASUREMENT					
1. Liquid					
2. Linear					
3. Weights					
4. Temperature					
5. Time					
BASIC PRINCIPLES 1. Commutative principle					
2. Associative principle					
3. Distributive principle					
PROBLEM SOLVING 1. Simple oral problems					
2. Written problems					

Worksheet 9. Readiness Skills Checklist.

								Name Readiness Skills Checklist
								Participates in small + large groups
								Follows oral instructions
								Language concepts
								Names capital letters
								Names lower case letters
								Knows sounds of letters
								Names numbers 1 - 10
								Counts to ____
								Writes numbers to ____
								Names shapes
								Draws shapes
								Can add/subtract to ____
								Writes name
								Reading level/ language experience
								Scissors
								Recognizes center symbols
								Knows color code + location of centers
								Recognizes colors
								Reads color words
								Uses contract/ centers effectively

Worksheet 10. First Grade Basic Skills Checklist.

												1st Grade Basic Skills Checklist Name Skills
												Writes name
												Names upper case letters
												Names lower case letters
												Knows letter sounds
												Writes upper and lower case letters
												Reads color words
												Reading level
												Uses basic sight vocabulary
												Uses phonics skills
												Works independently
												Completes tasks / uses contracts effectively
												Writes numbers
												Counts to ___
												Adds to ___
												Subtracts to ___

Inventory of Basic Concepts for 5 and 6 Year Olds

Name ______________________ Date ____________

Teacher ________________ Age/grade ____________

---

1. Tell me your name. ____________________
2. How old are you? ____________________
3. When is your birthday? ____________________
4. Show me your right hand. ____________________
5. What is your mother's name? ____________________

   What does your mother do? ____________________
6. What is your father's name? ____________________

   What does your father do? ____________________
7. Do you have any brothers and sisters?

   ____
8. What is your address (where do you live)?

   ____
9. What is your phone number? ____________________
10. Show me your left hand. ____________________
11. What does a teacher do?
12. What does a police officer do?
13. What is a family?

Name the letters:

B F C H I D G E J A K

O R L P S M Q N T U

W Y X V Z

---

c e g a f h b i l j k d v

n p r t o s q x y w u m z

What sound does the letter make?

B ___
C ___
D ___
F ___
G ___
H ___
J ___
K ___
L ___
M ___

N ___
P ___
Q ___
R ___
S ___
T ___
V ___
W ___

X ___
Y ___
Z ___

A ___
E ___
I ___
O ___
U ___

Name the numbers:

2 4 7 10 5 9 1

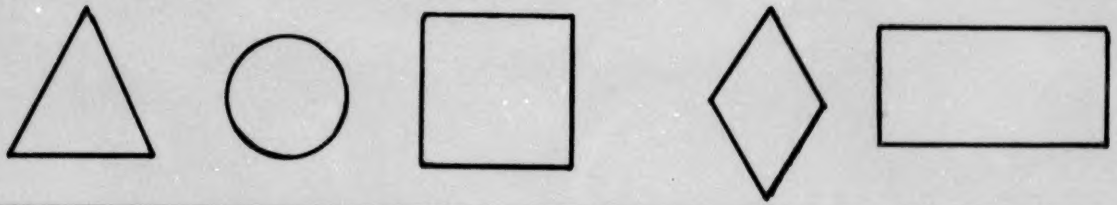
8 0 3 6

Count as far as you can: ______________

Write the numbers 1-10:

Worksheet 14. Inventory of Basic Concepts for Five- and Six-Year-Olds, Page 4.

Name these shapes:



Draw these shapes:

circle	square	triangle

rectangle	diamond

Worksheet 15. Inventory of Basic Concepts for Five- and Six-Year-Olds, Page 5.

Add:

2	3	4	6	5	6	3	7
+ 1	+ 2	+ 0	+ 1	+ 3	+ 6	+ 9	+ 8

Subtract:

4	3	6	8	6	9	12	16
- 1	- 2	- 0	- 5	- 6	- 4	- 7	- 9

Write your name:

Reading level: ____________________

Use of pencil: ____________________

Use of scissors: ____________________

Colors:

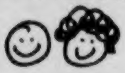
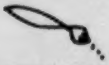
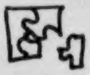
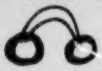
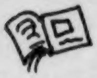
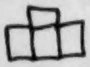
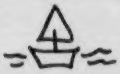
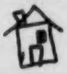
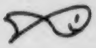
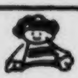
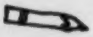
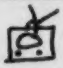
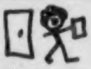
	Recognizes	Reads word
red		
yellow		
blue		
green		
purple		
orange		
black		
brown		
white		

Self-portrait:

How detailed? (Number of body parts, use of double lines rather than "sticks", etc.)

Use of color?

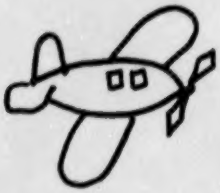
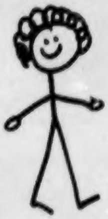
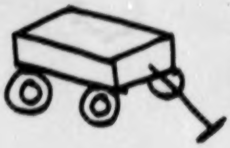
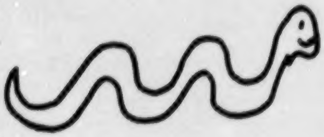
Worksheet 17. Inventory of Basic Concepts for Five- and Six-Year-Olds, Page 7.

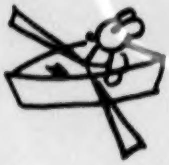
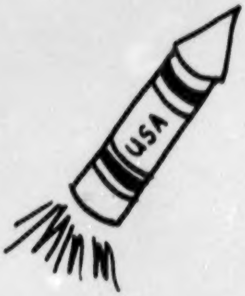
Center	Recognizes Symbol	Knows Location	Knows Color Code	Reads Word
Social Studies				
Art				
Language	ABC			
Puzzles				
Listening				
Reading				
Blocks				
Research	???			
Outdoors				
Dramatic Play				
Math	2+2=4			
Science				
Puppets				
Writing				
T.V.				
Library				

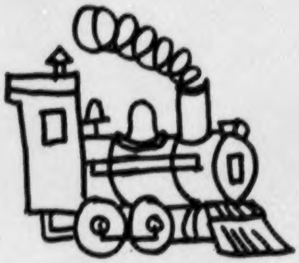
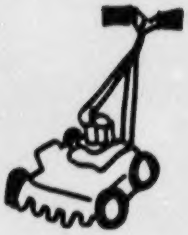
Worksheet 18. Easy Follow-Up Worksheet for "Faster Than, Slower Than."

Name ______________________

Circle the objects that are faster than a car.

Draw and color an object that is faster than a car.

Worksheet 19. Intermediate and Difficult Follow-Up Worksheet for "Faster Than, Slower Than."

Name ____________________

List 2 objects that move faster than a car.

1. ____________________

2. ____________________

List 2 objects that move slower than a car.

1. ____________________

2. ____________________

Draw and color an object that is faster than a car.

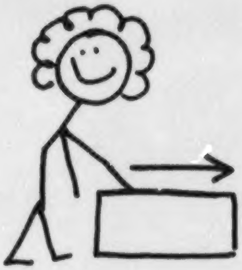
Draw and color an object that is slower than a car.

Worksheet 20. Easy Follow-Up Worksheet for "Is Work Being Done?"

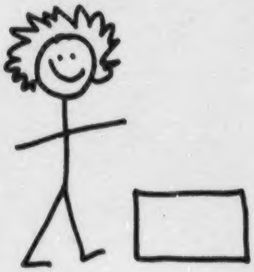
Name ______________________

Is work being done?

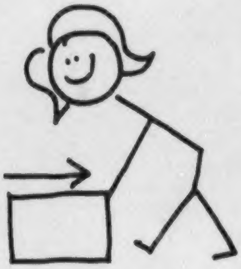
Color the pictures that show work being done.
Trace the words under the pictures.



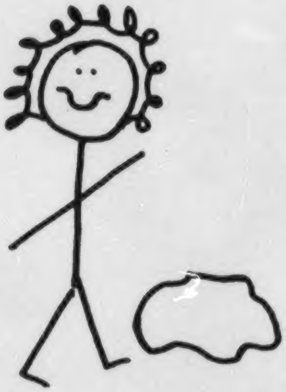
work



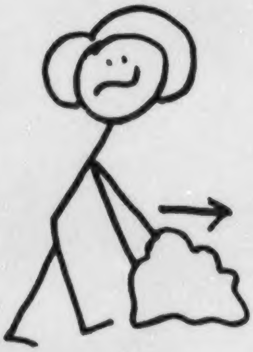
no work



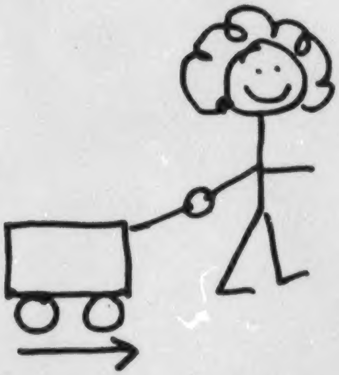
work



no work



work

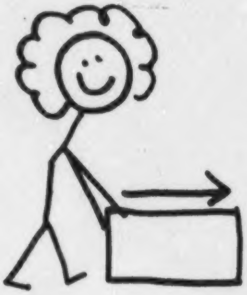


work

Worksheet 21. Intermediate Follow-Up Worksheet for "Is Work Being Done?"

Name____________________

1. Is work being done? Look at the pictures.
2. Write work or no work under each picture.
3. Color the pictures that show work being done.



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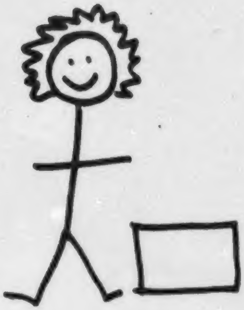

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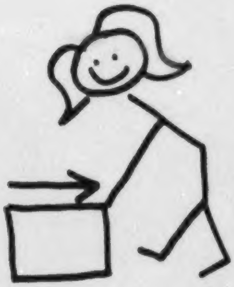

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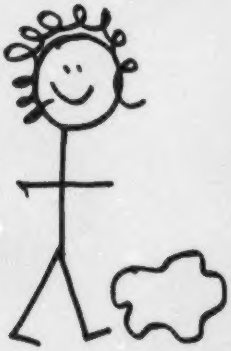

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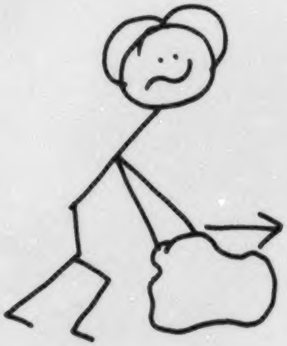

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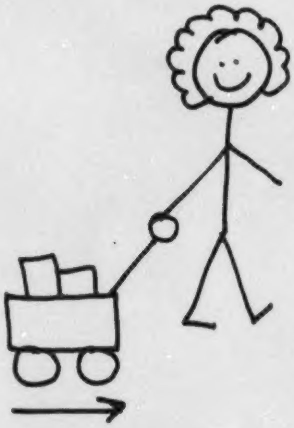


____

Name ______________________

Is work being done? Answer yes or no.

1. Jack is washing dishes. ________
2. Megan is asleep. ________
3. Charles is jumping rope. ________
4. The dog is scratching his ear. ________
5. The cat is purring. ________
6. Montego is reading. ________

Draw and color yourself working.

Worksheet 23. Easy Follow-Up Worksheet for "Push-Pull, Lift-Drop."

Name ____________________

Work is done when we move an object from one place to another. We move objects by lifting ↑, dropping ↓, pushing →, or pulling ← . Do the experiment. Record your answers.

How would you move these things? Circle the answer.

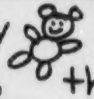
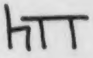
A pillow from the table TT to the floor.	lift ↑	drop ↓	push →	pull ←
A wagon from one place to another.	lift ↑	drop ↓	push →	pull ←
A teddy from the floor to the table TT.	lift ↑	drop ↓	push →	pull ←
A box of blocks from one place to another.	lift ↑	drop ↓	push →	pull ←
A chair from one table TT to another table TT.	lift ↑	drop ↓	push →	pull ←

Worksheet 24. Intermediate and Difficult Follow-Up Worksheet for "Push-Pull, Lift-Drop."

Name ________________

Work is done when we move an object from one place to another. We move objects by lifting, dropping, pulling, pushing.

How would you move these objects? Write your answers.

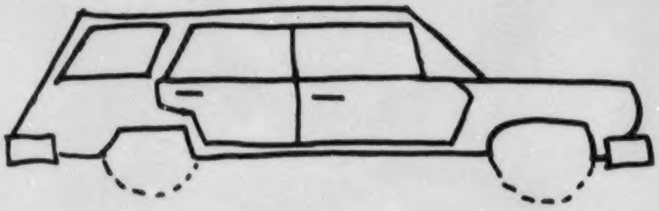
A pillow from the table to the floor.	
A wagon from one place to another.	
A teddy  from the floor to the table.	
A box of blocks from one place to another.	
A chair from one table to another. 	

lift ↑ drop ↓ push → pull ←

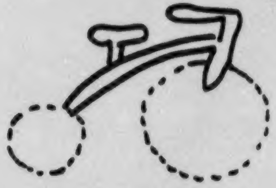
Worksheet 25. Easy Follow-Up Worksheet for "Wheels."

Name ______________________

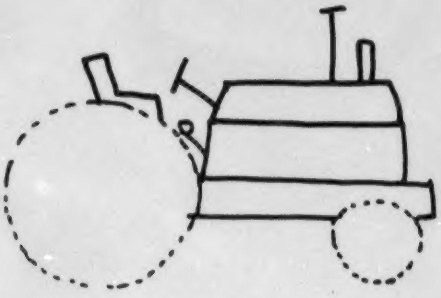
Put the wheels on the machines so they can move more easily.



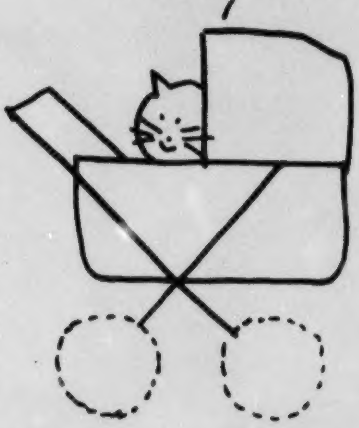
car



tricycle

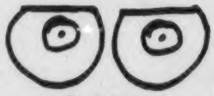


tractor

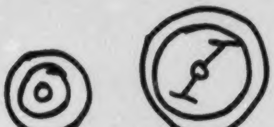


baby carriage

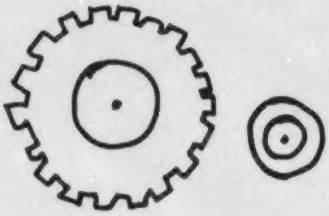
✂ cut here



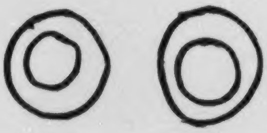
car



tricycle



tractor

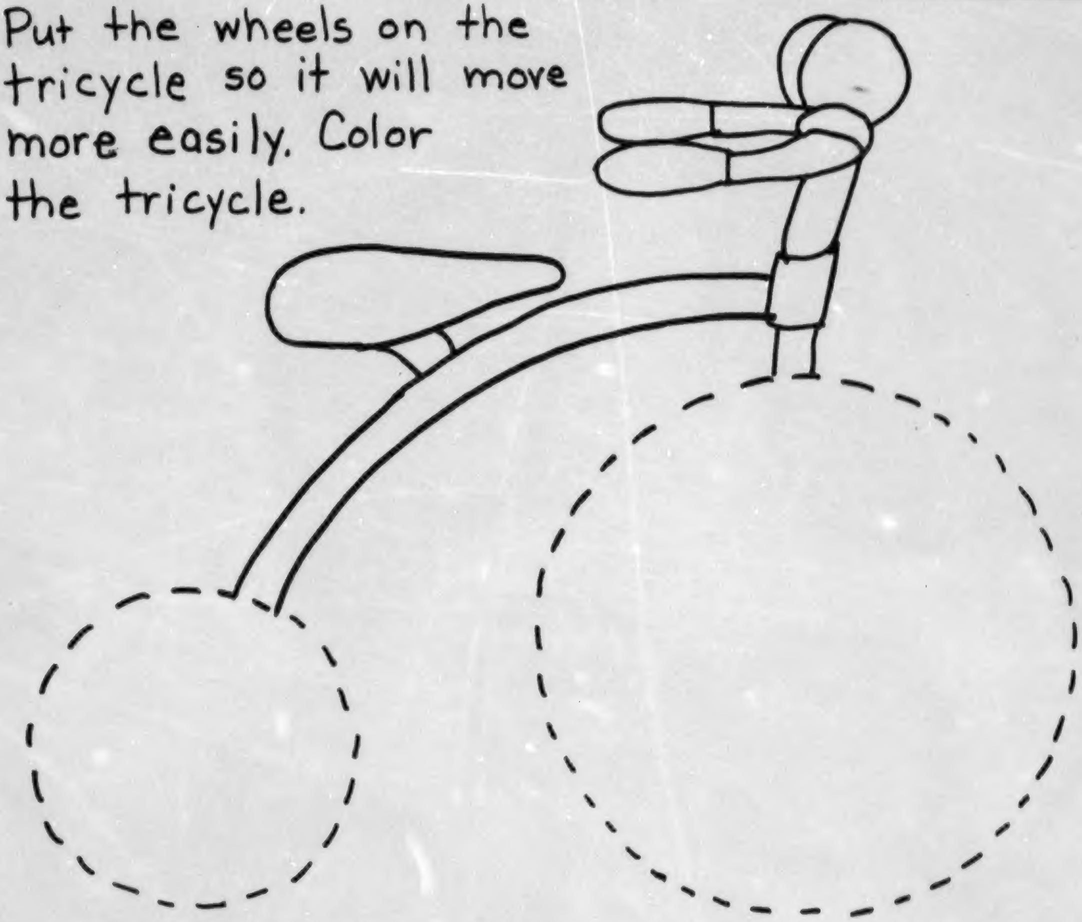


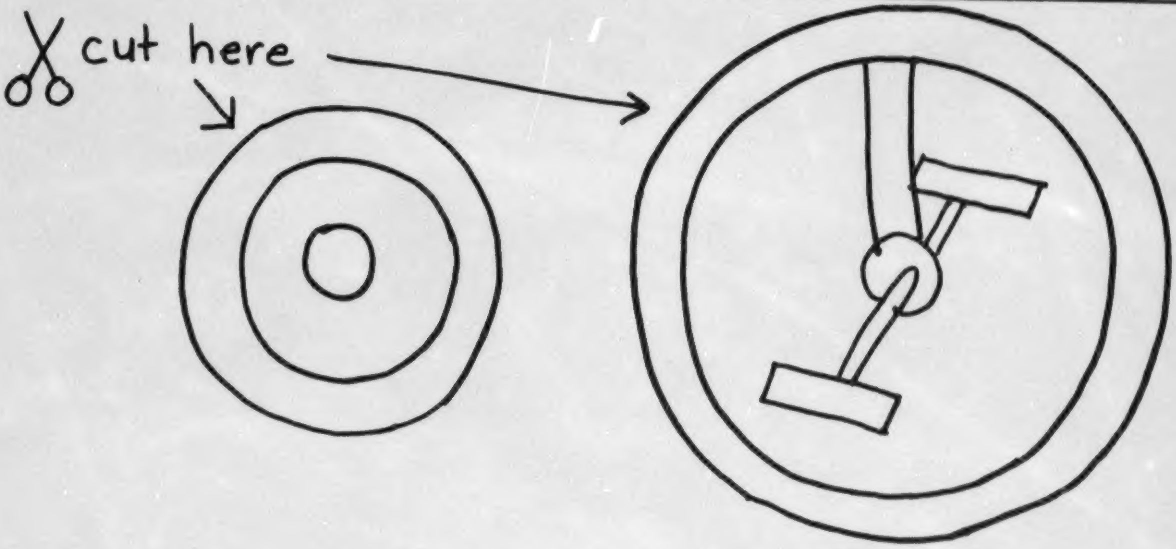
baby carriage

Worksheet 26. Intermediate Follow-Up Worksheet for "Wheels."

Name ______________________

Put the wheels on the tricycle so it will move more easily. Color the tricycle.





cut here

Name ______________________

Yes or No?

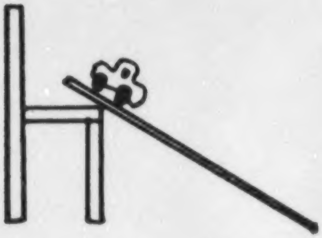
1. Wagons have wheels. ________
2. Dump trucks have wheels. ________
3. Sleds have wheels. ________
4. Bikes have wheels. ________
5. Skates have wheels. ________ .
6. Boats have wheels. ________
7. Airplanes have wheels. ________

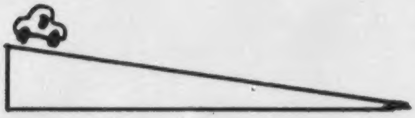
Draw and color your favorite vehicle with wheels!

Worksheet 28. Easy Follow-Up Worksheet for "Inclined Planes."

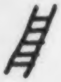
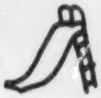
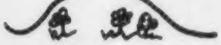
Name ______________________

Do the experiment.
Which car went faster? Circle your answer.





Trace the names of 3 inclined planes.

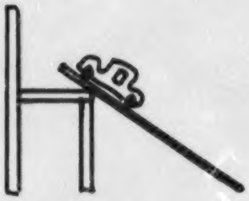
1. ladder 
2. slide 
3. hill 

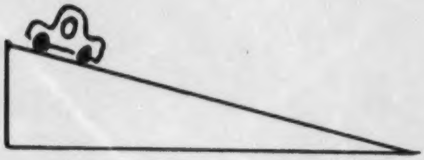
Draw and color an inclined plane.

Worksheet 29. Intermediate and Difficult Follow-Up Worksheet for "Inclined Planes."

Name ____________________

Which car went faster? Circle your answer.





List 4 inclined planes:

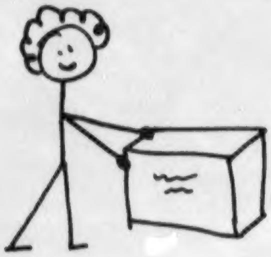
1. ____________________
2. ____________________
3. ____________________
4. ____________________

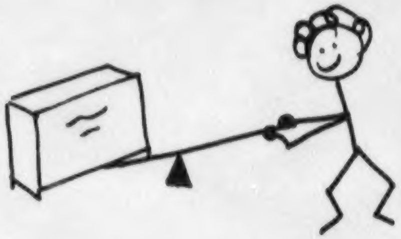
Draw and color an inclined plane that you have used!

Worksheet 30. Easy Follow-Up Worksheet for "Levers."

Name ______________________

Circle the easiest way of lifting the box.



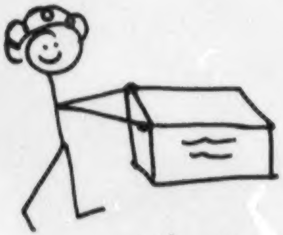


Draw and color 2 levers.

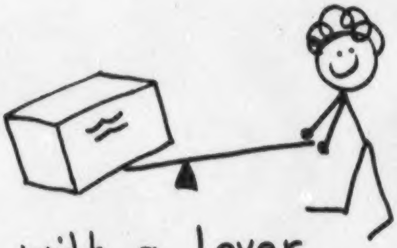
Worksheet 31. **Intermediate and Difficult Follow-Up Worksheet for "Levers."**

Name ______________________

Circle the easiest way of lifting the box.



with hands



with a lever

List 4 levers.

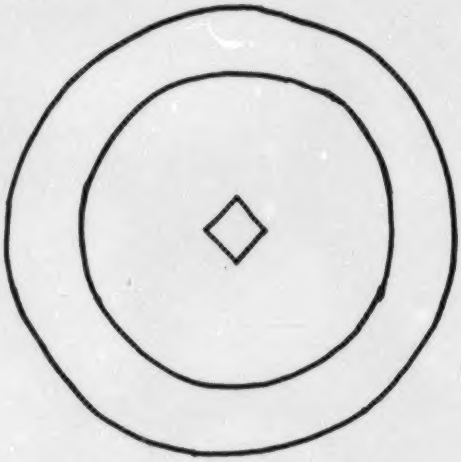
1. ______________________
2. ______________________
3. ______________________
4. ______________________

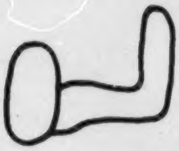
Draw and color a lever.

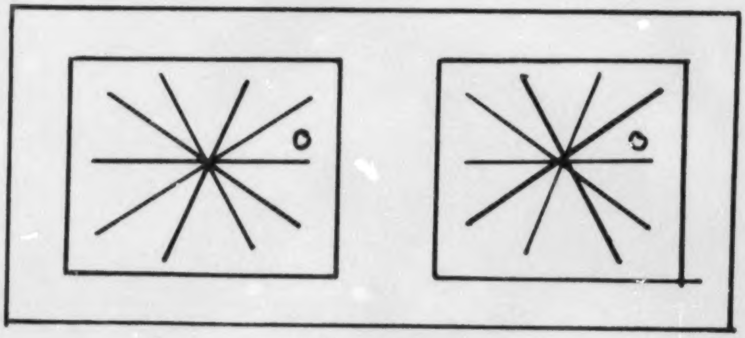
Worksheet 32. Easy Follow-Up Worksheet for "Pulleys."

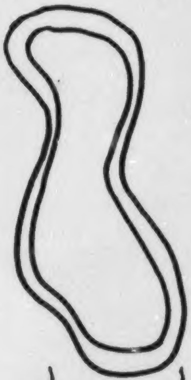
Name ______________________

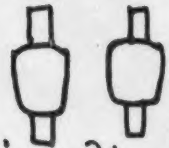
Color the parts of the pulley. Trace their names.

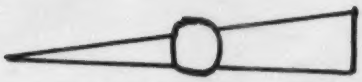

pulley


handle


base


rubber band

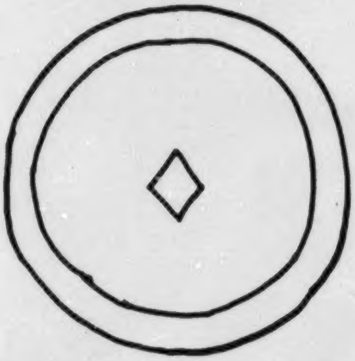

shafts


propeller

Worksheet 33. Intermediate and Difficult Follow-Up Worksheet for "Pulleys."

Name ____________________

Color and label the parts of the pulley.



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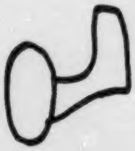

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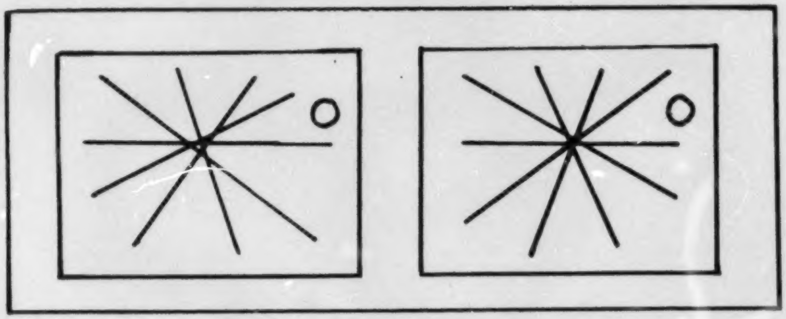

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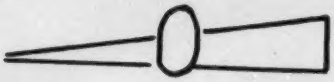

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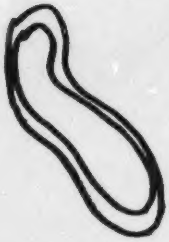

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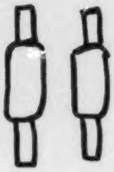

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<tr><td colspan="2">Area:</td><td colspan="3">Topic:</td></tr>
<tr><td colspan="5">Concept:</td></tr>
<tr><td>Day's</td><td>Objective</td><td>Group Activity</td><td>Science/Social Studies Center Activity</td><td>Other centers</td></tr>
<tr><td></td><td></td><td>Evaluation:</td><td>Evaluation:</td><td></td></tr>
<tr><td colspan="5">Concept:</td></tr>
<tr><td>Day's</td><td>Objective</td><td>Group Activity</td><td>Science/Social Studies Center Activity</td><td>Other centers</td></tr>
<tr><td></td><td></td><td>Evaluation:</td><td>Evaluation:</td><td></td></tr>
</table>

Worksheet 34. Unit Planning Form, Page 1.

Area:	Topic:	
Bulletin Board	Books/AV Materials	FieldTrips
		Resource people

Worksheet 35. Unit Planning Form, Page 2.

Worksheet 36. Wasik-Day Open and Traditional Learning Environments and Children's Classroom Behavior Instrument.

Page No: ______
Time: ____________ Date: __________
CODING SHEET: Child: ______________ ID No: ____________ Grade: __________
School: ______________ Teacher: ____________ Observer: ________

PLACE

Home Base-Circle										
Home Base-Other										
Study Area										
Center										
General Room Space										
Transition										
Other										

GROUP LEADER

Teacher										
Aide										
Intern										
Special Teacher										
Parent										
Peer										
Other										
None										

NUMBER IN GROUP

1										
2										
3-8										
9-15										
16-25										
26+										

MOVEMENT

Sitting										
Standing										
Moving										
Lying Down										

ACADEMIC BEHAVIOR

Reading										
Writing										
Math										
Obs. Ongoing Act										
Other										

COMMUNICATION

Listening

Teacher										
Aide										
Intern										
Peer										
Group										
Other										

Speaking

Teacher										
Aide										
Intern										
Peer										
Self										
Other										
None										

BEHAVIOR

Appro-Attending										
Appro-Transition										
Inappro-Nonprod/Time & Place										
Inappro-Agg/Resist										

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